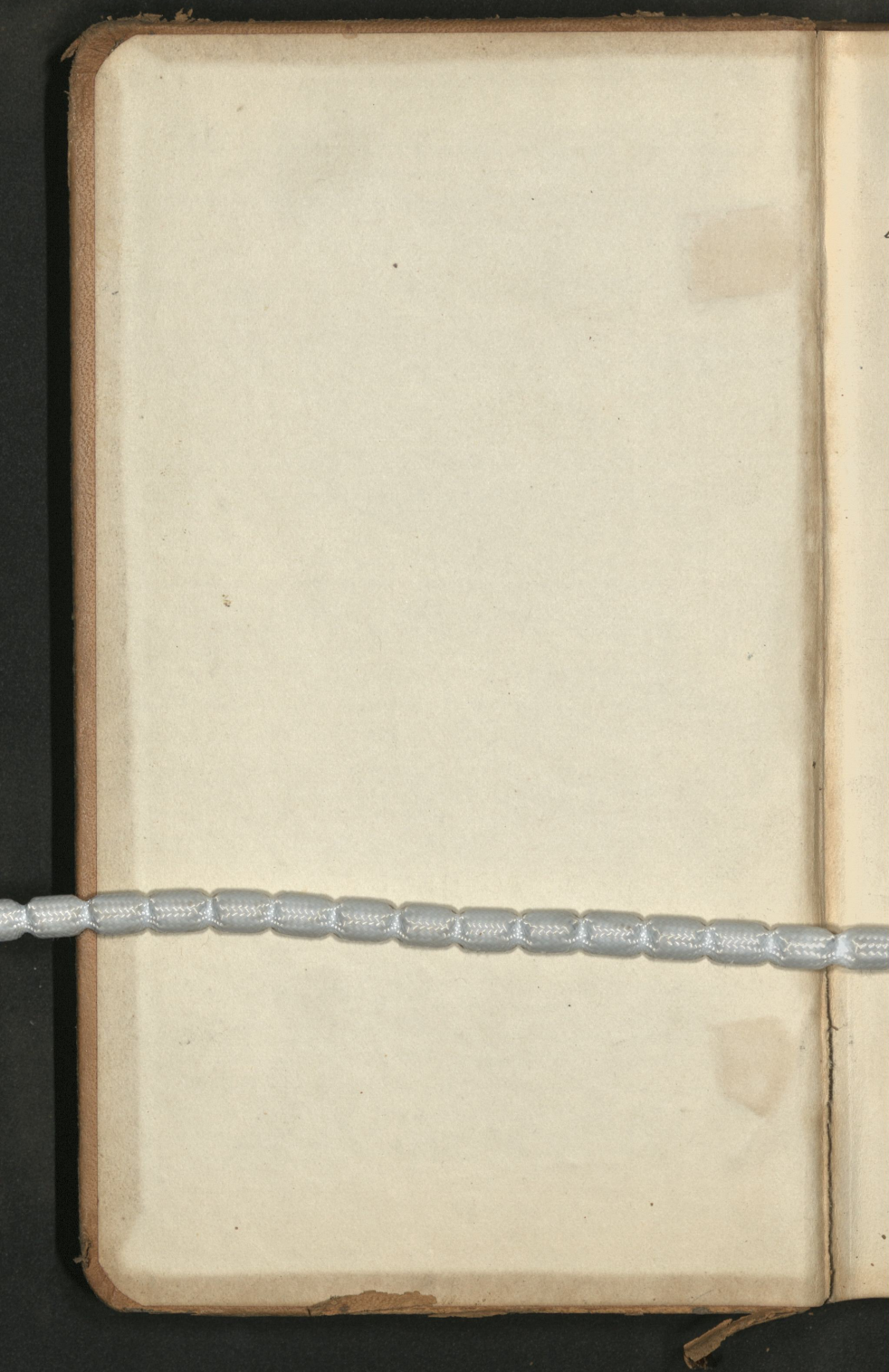


55 BB

LEVEL BOOK.

410.



BRADSHAW MOUNTAIN RAILROAD
CROWLEY KING BRANCH

Book No. 1.

Construction Notes.

Work begun Feb. 13-1902.

Pa

16

31

48

59

64

— Contents —

Pages. 1 to 10 incl. Cross Sections 1136 to 1189

11 Extra Work Section 23

12 Summary " "

13 COST " "

16-26 Cross Sections Sec 24. Sta 1189 to 1242

29 Extra Work " "

28 Summary " ", ALSO COST.

31-41 Cross Sections Sec. 25 Sta. 1242-1295

42 Extra Work " "

43 Summary " "

44 COST " "

48-59 Cross Sections Section 26 Stations 1295-1347

59-60 Extra Work " "

61 Summary " "

62 COST " "

64-74 Cross Sections Section 27 Stations 1347-1398

75 Extra Work Sec. 27 — Alignment & Sketch [Treadwell Spur.]

76 Cross Sections Treadwell Spur.

77 Summary Section 27.

78 COST " "

79 Reference Points

80 Bench Marks.

SECTION 23

Station Grade

L

C

R

1136 4327.47

$\frac{+3.6}{8.9}$

+2.9

$\frac{+2.4}{8.6}$

+70

$\frac{+1.4}{8.4}$

+0.9

$\frac{0.0}{8.0}$

1137

+2.5

$\frac{0.0}{8.0}$

-0.8

$\frac{-1.5}{9.3}$

1138

$\frac{-4.3}{13.5}$

-5.1

$\frac{-6.2}{16.3}$

1139 4335.00

$\frac{-6.5}{16.8}$

-7.3

$\frac{-8.2}{19.2}$

1140

$\frac{-8.6}{19.9}$

-10.3

$\frac{-11.7}{24.5}$

1141

$\frac{-7.1}{17.6}$

-9.5

$\frac{-12.7}{26.0}$

1142

+3.0

$\frac{-4.8}{10.2}$

-6.8

$\frac{-10.0}{22.0}$

1143

$\frac{-0.8}{8.2}$

-2.3

$\frac{-4.5}{13.8}$

+10. 4347.30

$\frac{0.0}{8.0}$

-1.9

$\frac{-3.2}{11.8}$

Areas Cub. Yds
Cut Fill Exc. Emb.

49.38

Sta 1136 to 1137 Ex 85.6 Cy.
Earth

80.8

12.98

0.0

Haul 82 yds from
1136 to 15 to 33 + 85
Haul = 190

4.8

4.5

0.0

12.17

85.6

231.3

112.74

Sta 1136 + 70 to
1145 Emb 4088.9^{cu.}

548.1

391 made from
cuts at ends

183.21

Balance 4049.8

894.3

less 5% 202.5

Borrow 3847.3

299.71

Class to 3847.3

1066.9 Allow 1/2 hauls 200
= 3850. Haul

276.40

835.7

174.88

405.1

43.85

13.7

0.0

30.01

8.4

62.8

4062.4

Station Grade

1144 4350.00

$\frac{+1.9}{8.5}$	C	$\frac{-2.2}{10.3}$
0.0		

→ +50

$\frac{+0.9}{8.2}$	$\frac{0.0}{2.0}$	-0.2	$\frac{-1.7}{9.6}$
--------------------	-------------------	--------	--------------------

+90

$\frac{+2.3}{8.6}$	0.0	$\frac{-2.0}{10.0}$
--------------------	-----	---------------------

1145

$\frac{+2.5}{8.6}$	$+0.2$	$\frac{0.0}{1.0}$	$\frac{-2.1}{10.1}$
--------------------	--------	-------------------	---------------------

+50

$\frac{+3.1}{8.8}$	$+0.9$	$\frac{0.0}{3.5}$	$\frac{-1.4}{9.1}$
--------------------	--------	-------------------	--------------------

1146

+3.00

$\frac{+2.7}{8.7}$	$+0.7$	$\frac{0.0}{2.5}$	$\frac{-1.9}{9.9}$
--------------------	--------	-------------------	--------------------

+50

$\frac{+1.4}{8.3}$	$\frac{0.0}{1.5}$	-0.6	$\frac{-4.0}{13.0}$
--------------------	-------------------	--------	---------------------

1147

4359.00

$\frac{+0.7}{8.2}$	$\frac{0.0}{6.5}$	-1.9	$\frac{-5.3}{14.9}$
--------------------	-------------------	--------	---------------------

+50

$\frac{+1.8}{8.5}$	$\frac{0.0}{3.0}$	-1.7	$\frac{-6.0}{16.0}$
--------------------	-------------------	--------	---------------------

1148

~~4362.00~~

$\frac{+0.5}{8.1}$	$\frac{0.0}{6.5}$	-2.1	$\frac{-8.0}{19.0}$
--------------------	-------------------	--------	---------------------

+25

0.0

Areas		Cub. Yds.	
Cut Fill		Exc.	Emb.
7.60	7.70	8.4	4062.4
		9.5	13.7
2.70	7.11		Sta 1143+10 to 1148+25 Exc 131.8 Cub. yds.
			1143+10 to 1147
		8.8	10.4
9.20	7.00		Class Lease Rock 109.8 ^{cu}
			Balance of Cut Solid Rock 22.0
		3.7	24
10.96	6.30		4088.9
			Haul 30.4 So far " 101.4 " "
		2.67	8.1
17.93	24.5		
		30.2	6.2
14.73	4.28		
		17.8	20.9
4.55	18.35		
		4.7	53.0
0.53	38.88		
		4.7	70.4
4.50	37.15		
		4.5	85.1
0.38	54.77		
0.0		0.1	163.4
		119.1	407.1
		12.7	59.1147 to 1148+25
		131.8	

Station Grade

L

C

R

1148+50 ~~43~~ 350

$\frac{-12}{8.8}$

-4.5

$\frac{-11.9}{24.9}$

1149

$\frac{-22}{10.3}$

-5.2

$\frac{-12.0}{25.0}$

+50

$\frac{-29}{11.4}$

-5.7

$\frac{-12.1}{25.1}$

1150

$\frac{-32}{11.8}$

-5.3

$\frac{-9.0}{20.5}$

+50

$\frac{-2.0}{10.0}$

-4.0

$\frac{-6.8}{17.2}$

1151

$\frac{0.0}{8.0}$

-1.1

$\frac{-2.5}{10.8}$

+50

$\frac{+1.7}{8.4}$

0.0

$\frac{-0.8}{8.2}$

+85

$\frac{+3.0}{8.7}$

+1.3

$\frac{0.0}{8.0}$

1152 ~~43~~ 75.00

$\frac{+3.5}{8.9}$

+2.5

$\frac{+1.3}{8.3}$

+50 ~~43~~ 75.50

$\frac{+5.0}{9.2}$

+4.0

$\frac{+3.1}{8.8}$

NOTE:- Grader crossed out show line
as Cross Sectioned, Graded not Crossed show
finished grade.

Areas Cub. Yds.
Cut Fill Exc. Emb.

			409.1	Sta 1145 1/2 to 1151 485
	12168			
			243.7	Emb 1692.7 Cut.
	14148			1634.3 made from
			275.9	Cuts at ends.
				balance 58.4
	15652			less 7% 2.8
				Borrow 55.6 Cut.
			263.7	class 1/2 Ea = 27.80
	128.29			1/2 Ea = 27.80
			197.7	
			8520	
			966	
0.0	1909			
		4.2	20.3	
6.80	280			
		19.2	1.2	
22.85	0.0		1506.2	
			186.5	add acc. grade change
		17.7	1692.7	
4070				
		101.0		
6840				
		153.1		
			2952	

Station	Grade	L	C	R
1153	4377.00	$\frac{+6.3}{9.4}$	+5.7	$\frac{+4.7}{9.2}$
+50		$\frac{+8.7}{10.2}$	+8.1	$\frac{+7.5}{9.9}$
1154	4380.00	$\frac{+8.8}{10.2}$	+8.4	$\frac{+7.8}{9.9}$
+50		$\frac{+7.7}{9.9}$	+7.3	$\frac{+6.8}{9.7}$
1155		$\frac{+6.6}{9.7}$	+6.0	$\frac{+5.8}{9.5}$
+50		$\frac{+5.1}{9.4}$	+4.9	$\frac{+4.5}{9.1}$
1156	4387.00	$\frac{+4.0}{9.0}$	+3.8	$\frac{+3.3}{8.8}$
+50		$\frac{+2.8}{8.7}$	+2.4	$\frac{+2.0}{8.5}$
1157	4387.00 4386.00	$\frac{+1.8}{8.5}$	+1.4	$\frac{+1.1}{8.3}$
+55		$\frac{+0.7}{8.2}$	+0.5	$\frac{0.0}{8.0} \quad \frac{0.0}{16.0}$

500' Vertical Curve

Areas Cub. Yds.
Cut Fill Exc. Emb.

97.01

Sta 1151 to 1158 Exc 1777.4 Cuy.

225.2 1153+50 to 1156 Class.

Solid Rock = 1589.1 Cuy.

146.20

1156 to 1158 Class L.R. = 188.3 "

275.0

Balance of cut Solid Rock

Total L.R. Rock = 188.3 Cuy.

150.82

" Solid " 1589.1

259.6

No subgrade as cut
was finished 1 ft above
cross sections grade

129.54

219.2

212.3 Cuy. left for Back filling

107.20

Haul 335 So. from

" 31.6 N. "

" 1100. from 1153+76 to 1160 = 4790.

177.9

" 400 " 1155+50 to 1160 = 1800.

Total Haul = 6590

84.92

137.0

63.02

95.2

39.84

58.5

23.36

30.8

6.85

00

3.8

2.8

1777.4

Station Grade

L

C

R

1158 ~~4384.40~~ $\frac{0.0}{8.0}$ -0.3 $\frac{-0.6}{7.9} \frac{0.0}{8.0} \frac{-0.7}{23.0}$

+50 $\frac{-0.5}{7.8}$ -0.9 $\frac{-1.2}{8.8} \frac{-0.4}{8.8} \frac{-1.2}{31.8}$

1159 ~~4384.40~~ $\frac{-0.7}{8.0}$ -1.1 $\frac{-1.4}{9.1} \frac{-0.3}{9.1} \frac{-1.2}{36.1}$

1160 $\frac{-1.2}{8.8}$ -1.6 $\frac{-2.1}{10.2} \frac{-0.4}{10.2} \frac{-1.4}{36.2}$

1161 ~~4380.00~~ $\frac{-1.3}{8.9}$ -1.8 $\frac{-2.4}{10.6} \frac{0.0}{10.6} \frac{-1.2}{23.8}$

1162 $\frac{-0.8}{8.2}$ -1.4 $\frac{-2.2}{10.3} \frac{0.0}{10.3} \frac{-1.0}{23.8}$

1163 $\frac{-0.4}{8.6}$ -1.3 $\frac{-2.5}{10.8} \frac{-0.2}{10.8} \frac{1.4}{24.8}$

+50 $\frac{0.0}{8.0}$ -0.7 $\frac{-1.6}{9.4} \frac{0.0}{9.4} \frac{-1.7}{23.6}$

1164 $\frac{+1.1}{8.3} \frac{0.0}{1.0} -0.2$ $\frac{-1.2}{8.8} \frac{0.0}{8.8} \frac{-1.7}{24.6}$

+50 ~~4374.75~~ $\frac{+2.0}{8.5}$ +0.9 $\frac{0.0}{8.0} \frac{-1.0}{17.5}$

Areas		Cub Yds.	
Cut	Fill	Exc.	Embl.

0.0	5.01		
-----	------	--	--

2.8

Sta 1157+55 to 1165

34.1 Embel 892.8 Cy.

3182

707.6 made from
Cuts at ends

65.5

balance 185.2

less 5% 9.2

Borrowed 176.0 Cy.

39.00

165.1

Class $\frac{1}{2}$ Ea = 88.0 $\frac{1}{2}$ L.R. = 88.0

50.15

164.0

3842

129.1

30.20

118.8

33.96

53.5

0.0 23.76

2.4

39.2

3.85 18.56

17.8

21.6

1542 4.75

43.2

2.9

794.6

98.2

63.4

892.8

add for change of grade

Station Grade

L

O

R

1165 4374.00

$$\begin{array}{r} +3.0 \\ 8.8 \end{array}$$

$$+1.9$$

$$\begin{array}{r} +0.8 \\ 8.1 \\ \hline 13.5 \end{array}$$

+50

$$\begin{array}{r} +4.6 \\ 9.2 \end{array}$$

$$+3.4$$

$$\begin{array}{r} +2.2 \\ 8.6 \end{array}$$

1166

$$\begin{array}{r} +5.7 \\ 9.4 \end{array}$$

$$+4.9$$

$$\begin{array}{r} +3.9 \\ 9.0 \end{array}$$

+50

$$\begin{array}{r} +5.8 \\ 9.5 \end{array}$$

$$+5.2$$

$$\begin{array}{r} +4.4 \\ 9.1 \end{array}$$

1167

-1.50

$$\begin{array}{r} +4.4 \\ 9.1 \end{array}$$

$$+4.1$$

$$\begin{array}{r} +3.7 \\ 8.9 \end{array}$$

+50

$$\begin{array}{r} +2.2 \\ 8.6 \end{array}$$

$$+2.0$$

$$\begin{array}{r} +1.8 \\ 8.5 \end{array}$$

+80

$$\begin{array}{r} 0.0 \\ 8.0 \end{array}$$

$$0.0$$

$$\begin{array}{r} -0.1 \\ 7.1 \end{array}$$

1168

$$\begin{array}{r} -1.8 \\ 9.7 \end{array}$$

$$-1.7$$

$$\begin{array}{r} -1.7 \\ 9.5 \end{array}$$

+50

$$\begin{array}{r} -5.9 \\ 15.8 \end{array}$$

$$-6.2$$

$$\begin{array}{r} -6.4 \\ 16.6 \end{array}$$

1168+85 B.C. 2x3x42

1169

4368.00

$$\begin{array}{r} -9.9 \\ 21.8 \end{array}$$

$$-10.7$$

$$\begin{array}{r} -11.6 \\ 24.4 \end{array}$$

Areas	Cub	Yds.
Cut Fill	Exc.	Emb.

63.4

3125 0.0

Sta 1163+50 to 1167+80 Exc. 7970

82.1 Class Solid Rock 797.0 @ y.

5746

Haul 29.450 free

" 70.422. "

130.5 " 90 from 65+10 to 62+80 = 210

" 500 " 66+30 to 68+70 = 1200

8348

Total Haul 1410.

159.9

8916

146.7

6930

95.0

3310 0.0

12.2 0.1

00

0.35

689.8

107.2

1/2 SG.

797.0

10.7

28.57

159.3

143.50

431.4

322.42

639.5

1241.0

Station Grade

L

C

R

1169+50 436725

$\frac{-10.6}{22.9}$

-11.6

$\frac{-12.9}{26.4}$

1170

$\frac{-8.5}{19.8}$

-9.5

$\frac{-10.0}{22.0}$

+50

$\frac{-6.2}{16.3}$

-7.1

$\frac{-8.0}{19.0}$

1171

$\frac{-3.5}{12.3}$

-4.1

$\frac{-5.1}{14.6}$

+50

$\frac{-1.7}{9.5}$

-2.4

$\frac{-2.9}{11.4}$

1172

$\frac{0.0}{8.0}$

-0.5

$\frac{-1.0}{8.5}$

+50

$\frac{+0.7}{8.2}$

+0.2

$\frac{0.0}{8.0}$

1173

$\frac{+3.5}{8.9}$

+2.3

$\frac{+1.6}{8.4}$

+50

$\frac{+5.3}{9.3}$

+4.3

$\frac{+3.3}{8.8}$

1174

4360.50

$\frac{+5.4}{9.4}$

+4.1

$\frac{+2.0}{8.5}$

Areas	Cub.	Yds.
Cut Fill	Exc.	Emb.

1241.0

36819

Sta 1167+50 to 1172+50

584.7 Emb'd 2639.5 Cu.

26330

661.6 Cu. made

405.8 from Cut So.

175.01

Balance 1977.9

less 5% 98.9

241.0 Borrow 1879.0

8524

Class 80% La = 1503.2^{cu}20% La = 375.8^{cu}

117.1

4118

45.2

0.0

762

2.7

4.7

442

00

2639.5

41.4 Sta 1172 to 1174+65 Exc 410.5 Cu.

Class Solid Rock 410.5 "

4029

105.2^{cu} Haul 43. No free

7331

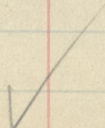
" 300^{cu} from 73+50 to 76+19 = 800. Haul

1293

6629

59.9

338.5



Station	Grade	L	C	R
11	1174+40 4359.90	$\begin{array}{r} +2.0 \\ 8.5 \end{array}$	+0.8	$\begin{array}{r} 0.0 \\ 8.0 \end{array}$
1	+65	$\begin{array}{r} 0.0 \\ 8.0 \end{array}$	-0.8	$\begin{array}{r} -2.1 \\ 10.0 \end{array}$
1175	-1.50	$\begin{array}{r} -0.7 \\ 8.0 \end{array}$	-1.8	$\begin{array}{r} -3.8 \\ 12.7 \end{array}$
1	+50	$\begin{array}{r} -1.6 \\ 9.4 \end{array}$	-2.9	$\begin{array}{r} -4.5 \\ 13.8 \end{array}$
1176	+38.3 4357.00	$\begin{array}{r} -1.7 \\ 9.5 \end{array}$	-3.2	$\begin{array}{r} -4.7 \\ 14.0 \end{array}$
11	+50	$\begin{array}{r} -1.3 \\ 8.9 \end{array}$	-2.4	$\begin{array}{r} -4.0 \\ 13.0 \end{array}$
1177		$\begin{array}{r} -1.2 \\ 8.8 \end{array}$	-2.4	$\begin{array}{r} -4.2 \\ 13.3 \end{array}$
117	+50 0	$\begin{array}{r} -2.9 \\ 10.9 \end{array}$	-4.6	$\begin{array}{r} -6.9 \\ 17.4 \end{array}$
1178		$\begin{array}{r} -2.6 \\ 10.9 \end{array}$	-4.2	$\begin{array}{r} -6.6 \\ 16.9 \end{array}$
117	+61 4357.00	$\begin{array}{r} -2.1 \\ 10.2 \end{array}$	-3.3	$\begin{array}{r} -5.7 \\ 15.6 \end{array}$

Areas	Cub.	Yds.
Cut	Fill	Exc Emb
1460	00	
		338.5
		4.5
00	1455	343.0
		67.5 $\frac{1}{2}$ sq.
		410.5
	3438	317
		829
	5499	
		1065
	6000	
		971
	4483	
		836
	4542	
		1341
	9939	
		1759
	9058	
		1812
	6987	
		111.1
		10084

S	Station	Grade	L	C	R
11	1179	4357.00	$\frac{-2.3}{10.5}$	-3.8	$\frac{-6.7}{17.1}$
11	+50		$\frac{-1.8}{9.7}$	-3.3	$\frac{-5.3}{15.0}$
	1180		$\frac{-3.4}{12.1}$	-4.7	$\frac{-6.2}{16.3}$
			1180 B.C. $1 \times 2 + 28$		
11	+50		$\frac{-1.2}{8.8}$	-2.3	$\frac{-4.2}{13.3}$
	1181	0	$\frac{0.0}{8.0}$	-0.9	$\frac{-2.6}{10.9}$
11	+55		$\frac{-1.2}{8.8}$	-3.3	$\frac{-5.4}{15.1}$
	+80		$\frac{0.0}{8.0}$	-1.4	$\frac{-3.7}{12.6}$
117	1182 + 30		$\frac{+1.7}{8.4}$	0.0	$\frac{-2.0}{10.0}$
	1183		$\frac{+2.4}{8.6}$	+0.7	$\frac{0.0}{9.3}$
117	+70		$\frac{+0.8}{8.2}$	0.0	$\frac{-3.7}{12.6}$
	1184	4357.00	$\frac{0.0}{8.0}$	-2.2	$\frac{-4.3}{13.5}$

Area Cub. Yds.
Cut Fill Exc. Emb.

1008.4

8394

Sta. 1174+40 to 1183

1385 Emb'd 1659.7 cu.

6560

502.0 Made from

Cuts at ends

1536

Balance 1157.7

less 5% 57.7

Borrow 1100.

10034

1339 Class $\frac{1}{2}$ Ea = 550 du. y. $\frac{1}{2}$ Lo Rock = 550.0 "

44.31

57.3

1760

816

6253

416

0.0

2737

Sta 1181+80 to 1184

4.2

31.8

Exc 51.7 Cu. y. Lo. R.

6.80

7.00

Have 30.7 So far

" 21.0 "

26.5

130

1366

300

1659.7

20.3

28.8

2.00

1919

0.7

32.2

0.0

38.70

51.7

274.9

395.9

5 Station Grade L C R

11 1185 4357.00 $\frac{-2.8}{11.2}$ -4.9 $\frac{-7.7}{18.6}$

11 1186 $\frac{-4.7}{14.1}$ -7.2 $\frac{-9.2}{20.8}$

+40 $\frac{-5.0}{14.5}$ -6.9 $\frac{-9.8}{21.7}$

1186+40 B.C. 2 x 3 x 34.

11 +85 $\frac{0.0}{8.0}$ -1.7 $\frac{-5.0}{14.5}$

1187 0 $\frac{+0.7}{8.2}$ $\frac{0.0}{4.5}$ -1.1 $\frac{-4.2}{13.3}$

11 +35 $\frac{0.0}{8.0}$ -0.8 $\frac{-1.8}{9.7}$

+50 $\frac{-1.0}{8.5}$ -1.4 $\frac{-2.4}{10.6}$

+85 $\frac{0.0}{8.0}$ -2.0 $\frac{-5.4}{15.1}$

117 1188 $\frac{+1.4}{8.4}$ $\frac{0.0}{3.5}$ -1.2 $\frac{-5.2}{14.8}$

+65 $\frac{+5.4}{9.4}$ +2.7 $\frac{0.0}{8.0}$

117 1189 4357.00 $\frac{+7.0}{9.8}$ +3.7 $\frac{+1.5}{8.4}$

Areas Cub. Yds.
Cot Fill Exc Emb

335.9

109.76

Sta 1183 to 1188 + 65

526.0 Emb'd 1438.6 Cu.

174.29

385.6 made from
Cuts at Ends

260.0

Balance 1053.0

176.69

Less 5% 52.6

Borrow 1000.4 Cu.

177.7

Class $\frac{1}{2}$ Ea = 500.2 "

0.0 36.62

 $\frac{1}{2}$ Lo Rock = 500.2 "

0.2 17.0

122 24.48

0.5 24.5

0.7

0.0 13.38

10.7

252.7

43.6

0.0 42.00

Sta 1189 + 85 to 1189 $\frac{1}{2}$ 1850 Cu.

0.6 19.8 class

315 2918

Solid R = 185.0 Cu.

58.0 23.4

Haul 51.7 So far

" 80 from 88 + 85 to 87 + 35

45.09 0.0

1438.6

= 120 yds haul

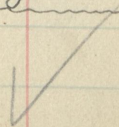
73.1

67.67

131.7

53.3 $\frac{1}{2}$ 56.

185.0



Section 23

Sta

Ditches

1161	Stations		Ea	L.R.	S.R.
	1143 to 1147	Side Ditch on L		296	
11	1181 to 1184	" " "			17.5
	1155 to 1168+50	Surf. Ditch on L 13x4x1350	195.0	68.0	
	1171	Surf. Ditch on L 1x5x275	25.5	25.4	
			220.5	120.0	17.5

117

Box Culverts

1169+85	2' x 2' $\frac{1}{2}$ x 49'	inside =	1613 F.B.M.	/
117 1180	1 x 1' $\frac{1}{2}$ x 28	,	536 . .	/
1186+40	1'8" x 2'10" x 34'	,	1119 . .	/
<u>Total Lumber</u>			3268 . .	

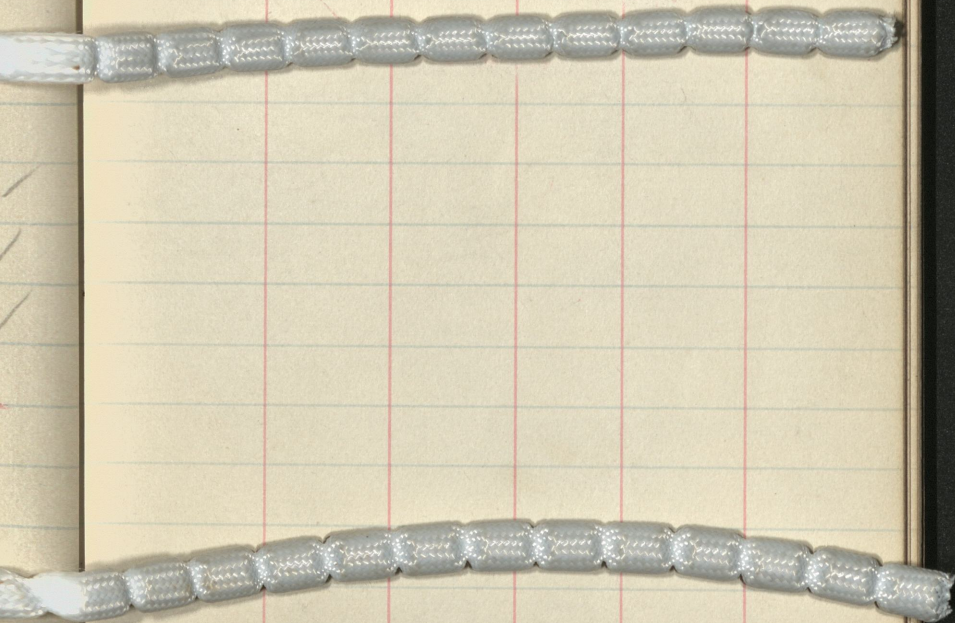
117

117

S.R.

17.5

17.5



SECTION 23

116	Page	Acres	Clearing	Excavation-Cub. Yds.				Total Embankment Cub. Yds.
				Total in Cut	Earth	Loose Rock	Solid Rock	
11	1			85.6	85.6			
	1							4088.9
	2			131.8		109.8	22.0	
	3							1692.1
11	4			1777.4		188.3	1589.1	
	5							892.8
	6			797.0			797.0	
	7							2639.5
11	7			410.5			410.5	
	9							1659.7
	9			51.7		51.7		
	10							1438.6
117	10			185.0			185.0	
	11			358.0	220.5	120.0	17.5	
				3797.0	306.1	469.8		
							3021.1	12412.7

Cut
Embankment
made
from

3

163

7

6

50

38

3930

117

Summary

12

Cu.Yds. Emb'k' made from Cuts	Cu.Yds. Shrinkage Deducted	Borrow - Cu.Yds. Earth	Loose Rock	Cu.Yds. F.B.M. Hauled Lumber 100' in Cu.Yds.
--	----------------------------------	---------------------------	---------------	--

38.9	39.1	202.5	3847.3	190
				3850

92.7	1634.3	28	278	278
------	--------	----	-----	-----

6590

92.8	707.6	9.2	88.0	88.0
------	-------	-----	------	------

1410

39.5	661.6	98.9	1503.2	375.8
------	-------	------	--------	-------

800

59.7	502.0	57.7	550.0	550.0
------	-------	------	-------	-------

38.6	385.6	52.6	500.2	500.2
------	-------	------	-------	-------

120

3268

3930.2	423.7	6516.5	1541.8	12960	3268
--------	-------	--------	--------	-------	------

SECTION 23.COST.

EXCAVATION, EARTH, 306.1 CU. YDS @ 0.14 = \$42.85

" L. ROCK, 469.8 " " " 0.32 = 150.34

" S. ROCK, 3021.1 " " " 0.85 = 2567.94

BORROW, EARTH, 6516.5 " " " 0.12 = 781.98

" L. ROCK, 1541.8 " " " 0.30 = 462.54

HAUL, 100 FT., 12960 " " " 0.01 1/2 = 194.40

LUMBER, FT. BM., 3268 " " " \$12.00 = 39216.00

TOTAL \$42390.00

42.8

150.3

2567.4

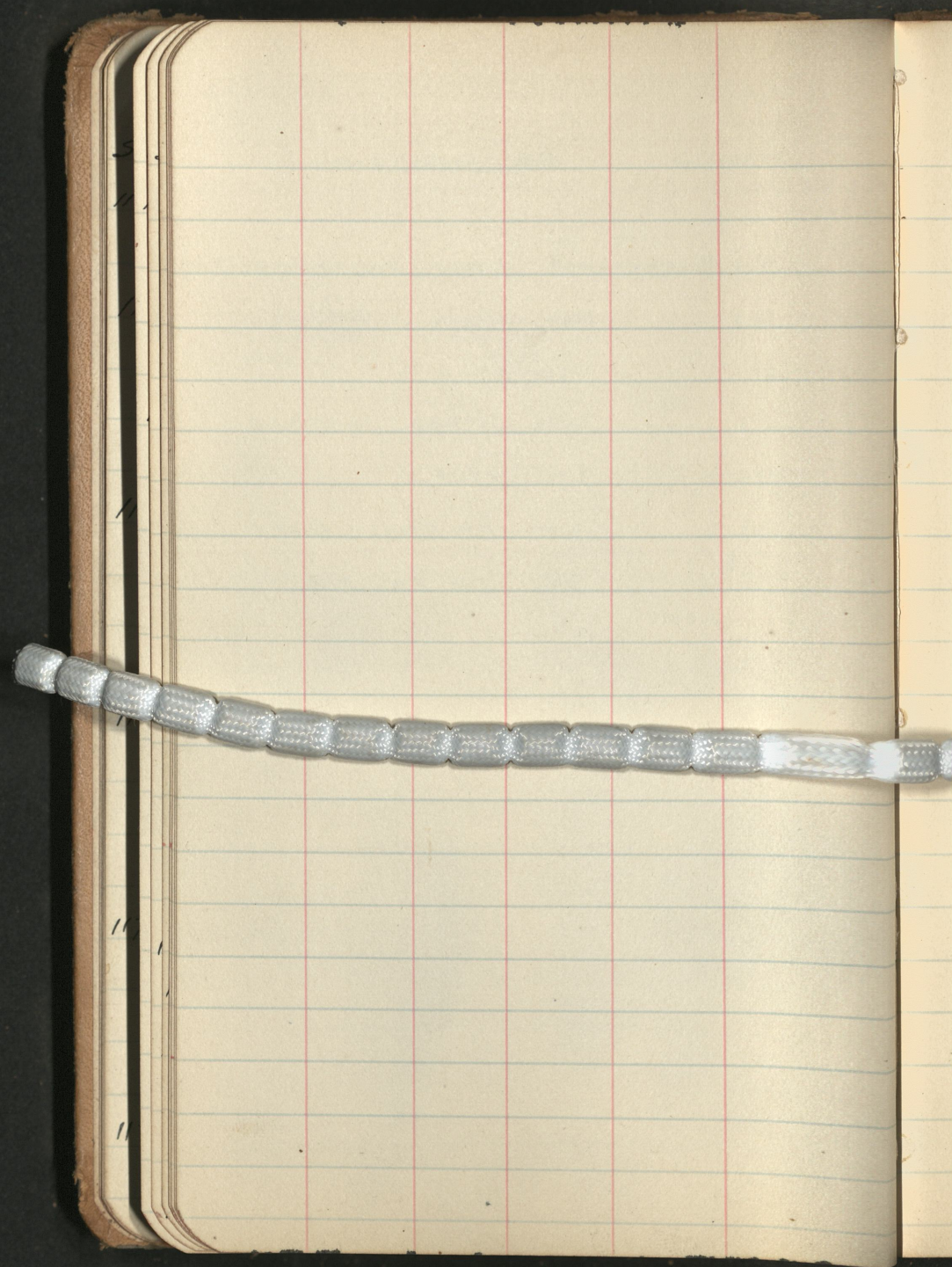
781.9

462.5

194.4

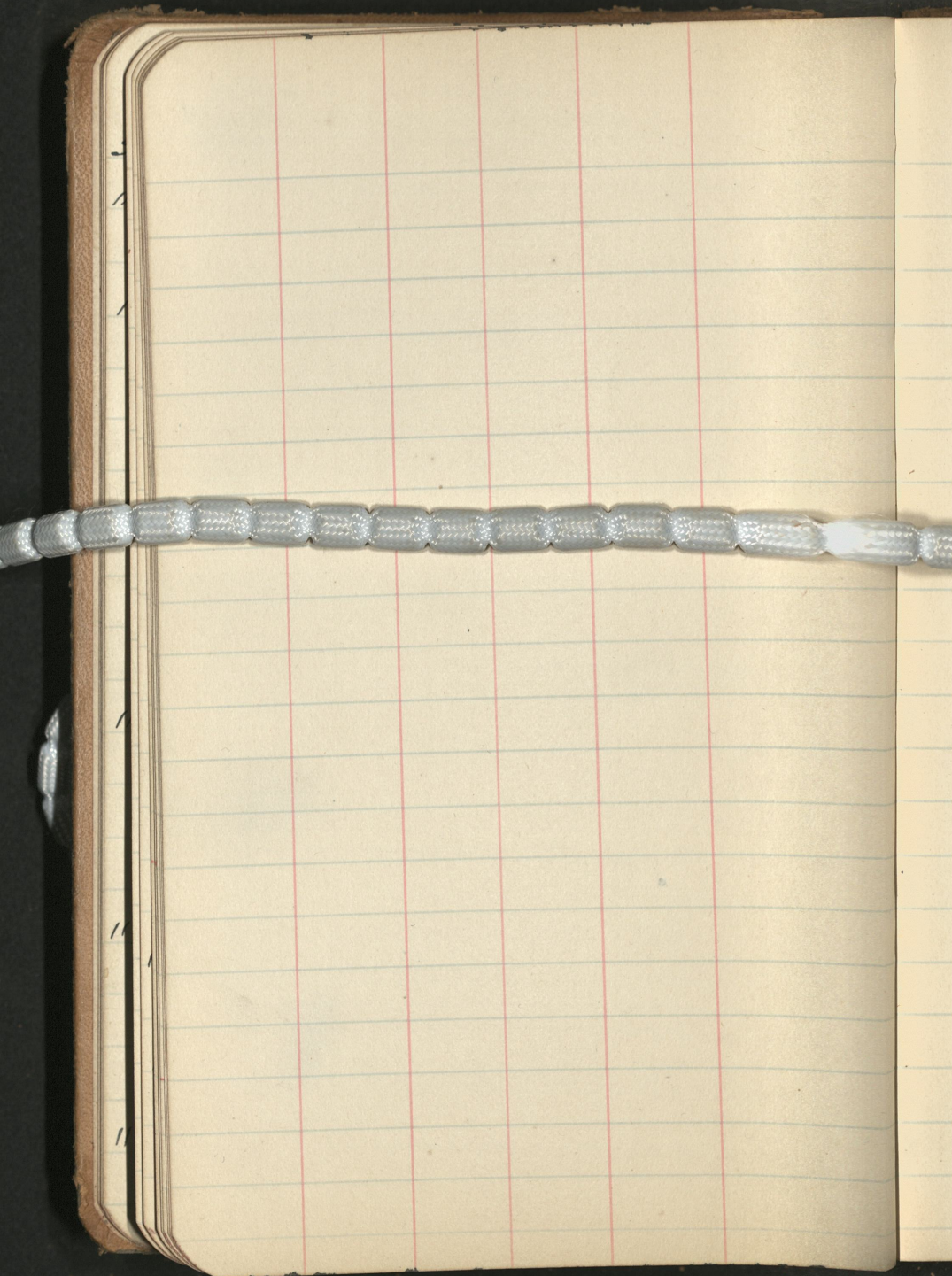
39.0

4239.0



14







SECTION 24

Station Grade

L	C	R
$\frac{+7.0}{9.8}$	$+3.7$	$\frac{+1.5}{8.4}$

1189 4357.00

+50

$\frac{+8.4}{10.1}$	$+5.0$	$\frac{+1.9}{8.5}$
---------------------	--------	--------------------

1190

$\frac{+7.8}{10.0}$	$+4.7$	$\frac{+2.2}{8.6}$
---------------------	--------	--------------------

+50

$\frac{+7.3}{9.8}$	$+4.3$	$\frac{+1.4}{8.4}$
--------------------	--------	--------------------

1191+10

$\frac{+5.4}{9.4}$	$+2.6$	$\frac{0.0}{8.0}$
--------------------	--------	-------------------

+90

$\frac{0.0}{8.0}$	-2.2	$\frac{-7.5}{18.3}$
-------------------	--------	---------------------

1192

$\frac{-0.6}{7.9}$	-3.0	$\frac{-9.4}{21.1}$
--------------------	--------	---------------------

1193

$\frac{-6.0}{16.0}$	-9.6	$\frac{-13.5}{27.3}$
---------------------	--------	----------------------

+50

$\frac{-7.9}{18.9}$	-10.3	$\frac{-12.5}{25.8}$
---------------------	---------	----------------------

1193+50 B.C. 2x3x42

1194

4357.00

$\frac{-9.1}{20.7}$	-10.5	$\frac{-12.6}{25.9}$
---------------------	---------	----------------------

Areas Cub. Yds.
Cut Fill Exc. Emb.

67.67

Sta 1189 to 119490 Cut 698.7 Cu.

143.9 1190+50 to 91+90 class 20p 1 1/2 ft

87.70

Loose Rock 44.7 Cu.

Balance Cut Solid R 654.0

158.7

83.71

Haul 75. N frw

" 380 from 1190+20 to 92+30 = 800.

146.0 " 1687 " 1189+30 to 1186+53 = 460

Total Haul 1260

73.93

131.3

44.22

0.0

43.8

54.5

0.0

5518

623.7

75.0 1/2 54.

698.7

24.8

78.50

656.6

276.09

534.9

301.60

576.1

320.60

1115.5

2962.4

Station Grade

1195 4359.00

+50

1196

+50

1197

+50

1198

+63

1199+23

+70 4368.40

L	C	R
-8.1		-11.5
19.2	-9.8	24.3

-10.3		-11.2
22.5	-10.0	23.8

-8.0		-10.0
19.0	-8.9	22.0

-7.1		-7.8
17.7	-7.2	18.7

-6.1		-6.9
16.2	-6.3	17.4

-5.4		-5.9
15.1	-5.8	15.9

-4.3		-4.8
13.5	-4.3	14.5

-2.0		-2.5
10.0	-2.1	10.8

-1.0		-1.7
8.5	-1.3	9.6

0.0		-1.1
8.0	-0.6	8.7

Areas Cub. Yds.
Cut Fill Exc. Emb.
29624

281.75

544.9

306.75

Sta 1191+10 to 1201+20

511.3 Emb. 5457.4 cu.

245.45

125 cu. made from

396.9 Cuts at Ends.

Balance 4205.0

less 5% 210.2

Borrow 3994.8 cu.

309.8 Class Earth

1513.4

260.0

129.45

204.5

91.40

150.5

37.59

65.3

212.1

262

0.0

8.86

0.3

7.9

5439.1

Station	Grade	L	C	R
1200	4369.00	$\begin{array}{r} +0.3 \\ 8.1 \end{array}$	$\begin{array}{r} 0.0 \\ 3.5 \end{array} -0.3$	$\begin{array}{r} 0.9 \\ 8.4 \end{array}$

1201		$\begin{array}{r} +0.3 \\ 8.1 \end{array}$	$\begin{array}{r} 0.0 \\ 2.5 \end{array} -0.3$	$\begin{array}{r} -0.6 \\ 7.9 \end{array}$
------	--	--	--	--

+20		$\begin{array}{r} +0.8 \\ 8.2 \end{array}$	+0.2	$\begin{array}{r} 0.0 \\ 8.0 \end{array}$
-----	--	--	------	---

1202		$\begin{array}{r} +3.1 \\ 8.8 \end{array}$	+2.5	$\begin{array}{r} 1.8 \\ 8.5 \end{array}$
------	--	--	------	---

+84	42.00	$\begin{array}{r} +3.5 \\ 8.9 \end{array}$	+2.6	$\begin{array}{r} +2.1 \\ 8.5 \end{array}$
-----	-------	--	------	--

1203+32		$\begin{array}{r} +3.7 \\ 8.9 \end{array}$	+3.1	$\begin{array}{r} +2.1 \\ 8.5 \end{array}$
---------	--	--	------	--

1204		$\begin{array}{r} +4.4 \\ 9.1 \end{array}$	+3.7	$\begin{array}{r} +3.0 \\ 8.8 \end{array}$
------	--	--	------	--

+50		$\begin{array}{r} +4.9 \\ 9.2 \end{array}$	+3.9	$\begin{array}{r} +3.3 \\ 8.8 \end{array}$
-----	--	--	------	--

1205	4379.00	$\begin{array}{r} +5.9 \\ 9.5 \end{array}$	+5.1	$\begin{array}{r} +4.3 \\ 9.1 \end{array}$
------	---------	--	------	--

+50	0.324	$\begin{array}{r} +6.9 \\ 9.7 \end{array}$	6.3	$\begin{array}{r} +5.5 \\ 9.4 \end{array}$
-----	-------	--	-----	--

Areas		Cub	Vds.
Cut	Fill	Exc.	Emb
		0.3	5439.7

0.67 540

2.8 16.8

0.83 366

2.1 0.9

4.82 0.0

5457.4

6.82

4123

Sta 1199+70 to 1208+50 Excav.

1342 1868.0 Cub yds.

4502

1199+70 to 1204+90 Class
Earth 671.0 cu.

844.6 1204+90 to 1208+50

Class Slips L.R. 17.5 cu.

5017

Balance Solid R. 1179.5

1422

62.72

Haul run So. for

" 460 W. "

121.0

" 620. from 1203+50 to 1209+75 = 3596

" 1080. from 1206+15 to 1211+30 = 5364

67.90

Total haul 9160.

1446

8823

Slips on L

3.0

1833

109.77

Slips on R

2170

4.0

1107.3

Station Grade

1206 4379.32

L	C	R
$\frac{+7.8}{10.0}$	+7.0	$\frac{+6.2}{9.6}$

+50

$\frac{+7.8}{10.0}$	+7.0	$\frac{+6.2}{9.5}$
---------------------	------	--------------------

1207

$\frac{+6.7}{9.7}$	+5.6	$\frac{+4.7}{9.2}$
--------------------	------	--------------------

+50

$\frac{+4.6}{9.2}$	+3.4	$\frac{+2.4}{8.6}$
--------------------	------	--------------------

+95

+0.324

$\frac{+1.9}{8.5}$	+0.8	$\frac{0.0}{8.0}$
--------------------	------	-------------------

1208+50

$\frac{0.0}{8.0}$	-1.0	$\frac{-2.5}{10.8}$
-------------------	------	---------------------

1209

$\frac{-1.2}{8.8}$	-2.2	$\frac{-4.3}{13.5}$
--------------------	------	---------------------

+50

$\frac{-1.8}{9.7}$	-2.9	$\frac{-4.8}{14.2}$
--------------------	------	---------------------

1210

$\frac{-2.0}{10.0}$	-3.1	$\frac{-5.1}{15.6}$
---------------------	------	---------------------

+50 438079

$\frac{-2.8}{11.2}$	-4.2	$\frac{-6.2}{16.3}$
---------------------	------	---------------------

Areas Cub. Yds.
Cut Fill Exc Emb

11073

12460

slips

8.5

229.7

12345

slip

2.0

2055

9852

1452

58.26

60.4

1430

00

9.6

12.3

0.0

1815

1768.2

99.8

1/2 Sta. 1204+90
+8+50

1868.0

57.3

4378

Sta 1207+956/1213+85

94.0 Emb'd 1553.4 cu.

5775

made from
Outside Ends.

115.2

6663

1443

8925

169.4

5925

Station	Grade	L	C	R
1211	4380.96	$\frac{-2.7}{11.1}$	-4.0	$\frac{-7.4}{18.1}$

1212		$\frac{-3.9}{12.9}$	-5.4	$\frac{-8.3}{19.5}$
------	--	---------------------	------	---------------------

1213		$\frac{-2.1}{10.2}$	-4.2	$\frac{-7.6}{18.4}$
------	--	---------------------	------	---------------------

+50		$\frac{0.0}{8.0}$	-1.7	$\frac{-4.1}{13.2}$ ✓
-----	--	-------------------	------	-----------------------

+85	+0.324	$\frac{+3.6}{8.9}$	+1.9	$\frac{0.0}{8.0}$
-----	--------	--------------------	------	-------------------

1214		$\frac{+4.3}{9.1}$	+2.2	$\frac{+0.7}{8.2}$
------	--	--------------------	------	--------------------

+50		$\frac{+7.3}{9.8}$	+5.2	$\frac{+3.2}{8.8}$
-----	--	--------------------	------	--------------------

1215		$\frac{+7.8}{9.9}$	+6.2	$\frac{+4.1}{9.0}$
------	--	--------------------	------	--------------------

+50		$\frac{+6.5}{9.6}$	+4.7	$\frac{+2.9}{8.7}$
-----	--	--------------------	------	--------------------

+70	4382.48	$\frac{+3.7}{8.9}$	+1.6	$\frac{0.0}{8.0}$
-----	---------	--------------------	------	-------------------

Areas Cub. Yds.
Cut Fill Exc. Emb.

592.5

9375

4147

130.18

4152

9401

117.0

0.0 3237

13.1 14.0

3046 0.0

1553.4

19.3 Sta 1213+50 to 1216+25 Exp. 628.0 @ 4.

3903

Class Solid Rock 628.0 @ 4.

119.8 Haul 63.7 50 yds

" 46. N. "

9036

" 70 yds 1214+10 to 1215+15 = 80.

" 380. " 1214+15 to 1215+15 = 840

182.0

Total Haul 920.

10619

173.0

8061

40.3

2832 0.0

12.2 11.4
559.7
68.3 1/2 50.
628.0

Station Grade

1216 + 25 438266

+ 50

1217

+ 50

1218

+ 50

1219

+ 32

+ 75

1220 + 25 438396

L	C	R
0.0	-14	-3.5
8.0		-12.3

-1.1	-30	-54
8.7		15.1

-3.2	-57	-80
11.8		19.0

-4.4	-70	-134
13.6		27.1

-5.3	-81	-106
15.0		22.9

-5.0	-68	-94
14.5		21.1

1218 + 50 B.C. 1 x 2 x 34

-38	-54	-73
12.7		18.0

-2.8	-42	-69
11.2		17.4

-14	-24	-41
9.1		13.2

0.0	-0.7	-1.2
8.0		8.8

Areas Cub. Yds.
Cut Fill Exc. Emb

0.0 2646

11.4

39.3

58.45

Sta 1215+70 to 1220+45

171.7 Emb'd 1830.5 cu.

126.98

Made from Cuts

307.2 at Ends.

204.75

383.2

209.15

352.4

171.44

271.5

121.74

127.9

94.01

111.5

46.01

51.9

0.0 1008

1.73 2.5
1830.5

Station	Grade	L	C	R
---------	-------	---	---	---

1220	+45	$\frac{+0.9}{8.2}$	+0.4	$\frac{0.0}{8.0}$
------	-----	--------------------	------	-------------------

1221		$\frac{+3.1}{8.8}$	+3.5	$\frac{+2.7}{8.7}$
------	--	--------------------	------	--------------------

1222		$\frac{+8.4}{10.1}$	+8.2	$\frac{+7.9}{10.0}$
------	--	---------------------	------	---------------------

+50		$\frac{+10.3}{10.6}$	+10.0	$\frac{+9.8}{10.5}$
-----	--	----------------------	-------	---------------------

1223		$\frac{+12.1}{11.0}$	+11.7	$\frac{+11.5}{10.9}$
------	--	----------------------	-------	----------------------

+50		$\frac{+12.3}{11.1}$	+11.6	$\frac{+10.7}{10.7}$
-----	--	----------------------	-------	----------------------

1224		$\frac{+11.8}{10.9}$	+10.8	$\frac{+9.9}{10.5}$
------	--	----------------------	-------	---------------------

+65		$\frac{+11.5}{10.9}$	+10.8	$\frac{+9.6}{10.4}$
-----	--	----------------------	-------	---------------------

1225		$\frac{+8.8}{10.2}$	+8.0	$\frac{+7.3}{9.8}$
------	--	---------------------	------	--------------------

+65	4385.71	$\frac{+1.2}{8.3}$	+0.4	$\frac{0.0}{8.0}$
-----	---------	--------------------	------	-------------------

Areas Cub. Yds.
Cut Fill Exc. Emb.

684 00

1.7

Sta 1220+25 to 1225+75

61.8 Exc. 3/28.0 Cub. yds.

53.82

1220+25 to 1221+10 Class

373.0 Earth 132.3 Cy.

147.61

1221+10 to 1222+25 Class

242 ft. Earth = 153.0 Cy.

308.8 Class Slip LoR. 93.3 "

185.90

Balance of Cut Solid Rock

378.2 Total Earth 285.3 Cy.
7.0

222.51

slips

" Lo Rock 93.3 "

slips

30.5

" Solid " 2749.4 "

408.3

218.44

slips

Haul 34.4 Lo. free
" 7.2 N. "

389.6

" 800 ft. from 1220 to 1218+40 = 2880

" 2000 " 1223+80 to 27+80 = 8000

202.36

Total Haul 10880.

483.6

199.42

slips

15.0

222.8

144.40

183.5

8.06

00

1.0

1.4

2905.6

222.4 = 710.59

3128.0

Station Grade

L

C

R

1225+75 4385.74

0.0

-0.8

-1.4

8.0

-0.8

9.1

1226

-0.6

-16

-2.1

7.9

-16

10.1

1227

-6.0

-7.1

-9.0

16.0

-7.1

20.5

+50

-10.4

-12.0

-14.4

22.6

-12.0

28.6

1228

-16.8

-20.0

-21.0

32.2

-20.0

38.5

+30

-21.8

-22.9

-24.4

39.7

-22.9

43.6

1228+50 BC. 2x3x48

+70

-18.5

-20.3

-22.6

34.8

-20.3

40.9

1229

-16.5

-18.3

-20.6

31.8

-18.3

37.9

+50

-11.8

-13.2

-14.9

24.7

-13.2

29.4

1230

4387.11

-2.6

-4.2

-5.7

10.9

-4.2

15.6

Areas Cub. Yds.
Cut Fill Exc. Emb.

0.0 11.74

1.4

Sta 12+85 to 1230+35

16.5 Emb. 1259.5 cu.

2385

3958.6 Cu. Y. made

381.3 from Cuts

Balance 3300.9 cu.

182.07

less 5% 165.0 "

533.4

(Borrow) 3135.9 "

394.00

class 1/2 Ea = 1568.0 "

1/2 Lo Rock = 1567.9 "

1141.9

839.30

Haul 1500 yds 170'

= 2550. Haul

10860

111548

15020

91220

933.2

767.60

1127.9

450.51

495.6

84.70

37.3

72565

Station Grade

1230+20 4387.18

L

C

R

0.0
8.0

-1.0

-2.0
10.0

+35

+1.8
8.5

+1.1

0.0
8.0

+50

+3.6
8.9

+2.8

+1.8
8.5

1231

+8.0
10.0

+7.3

+6.8
9.7

+50

+10.2
10.6

+8.9

+8.4
10.1

1232

+9.8
10.5

+9.0

+8.0
10.0

+50

+8.3
10.1

+7.7

+7.3
9.8

1233

+7.5
9.9

+6.1

+5.2
9.3

+65

+1.1
8.3

+0.3

0.0
8.0

+75 4388.33

0.0
8.0

-0.6

-1.3
9.0

Areas		Cub. Yds.	
Cut	Fill	Exc	Emb
0.0	16.00		7256.5
		3.0	3.0
1628	0.0		7259.5
		173	Sta 1230+20 to 1233+75
45.96			Exc av. 1581.0 Cub. Yds.
		1639	Class Slip LoR = 22.9 Cy.
131.10			Balance Cut SolidR = 1558.1
	slips	13.9	
166.52		275.6	Haul 108 yds So fr.
			" 101 No. fr.
			" 380 fr 1231+15 to 29+65 = 570.
	slip	305.5	" 850 + 1232+25 + 35+25 = 2550.
1634.5		3.0	Total Haul 3120.
		280.1	
139.02	slips	6.0	
		230.0	
109.36		139.9	
6.85	0.0		
0.0	9.65	0.8	1.2
		1439.0	
		142.0	71.59.
		1581.0	215.4
			216.6

Station Grade

L

C

R

1234+50 4388.57

-5.5
15.3

-6.2

-7.0
17.5

1235

-8.4
19.6

-9.6

-10.7
23.1

1234+95 B.C. 1 x 2 x 40

+35

-12.0
25.0

-12.7

-14.2
28.3

+80

-17.2
32.8

-19.2

-19.9
36.9

1236+20

-17.7
33.6

-19.5

-21.0
38.5

+50

-13.7
27.6

-15.7

-18.2
34.3

1237

-12.1
25.2

-13.5

-16.2
31.3

+50

-3.9
12.9

-5.9

-8.4
19.6

1238+05

0.0
8.0

-0.5

-1.0
8.5

+50 4389.87

+4.5
9.1

+2.5

0.0
8.0

Areas	Cub. Yds.
Cut Fill	Exc. Emb.

1454.3

2166
Sta 1233+65 to 1238+50
3863 Emb'kt 55230 Cy.

2718.1

3430.7 made from

4550 Cuts at Ends

43016

balance 2092.3

less 5% 104.7

bumped 1987.6 Cy.

1024.3

798.97

Class 1/2 Ea 993.8 "

1/2 L.R. 993.8 "

1212.9

838.43

Haul 250 yds 180 ft

= 450 yds Haul

797.8

597.56

998.1

480.42

573.5

138.93

149.3

0.0

763

21.9

4.2

3938

-0.0

5818.0

295.0 deduct as bank stood to 1 3/8 slope

31.0

5523.0

52.9

SECTION 24

Station	Grade	L	C	R
1238+75	4389.95	$\frac{+3.4}{8.9}$	+1.7	$\frac{0.0}{8.0}$

+95	$\frac{+3.5}{8.9}$	+1.0	$\frac{0.0}{2.5}$	$\frac{-1.5}{9.3}$
-----	--------------------	------	-------------------	--------------------

1239+05	$\frac{+4.2}{9.1}$	+1.2	$\frac{0.0}{8.0}$
---------	--------------------	------	-------------------

+35	$\frac{+6.7}{9.7}$	+5.5	$\frac{+3.7}{9.9}$
-----	--------------------	------	--------------------

1240	$\frac{+8.6}{10.2}$	+7.2	$\frac{+5.3}{9.3}$
------	---------------------	------	--------------------

+50	$\frac{+11.2}{10.8}$	+8.7	$\frac{+6.7}{9.7}$
-----	----------------------	------	--------------------

1241	$\frac{+12.5}{11.1}$	+10.1	$\frac{+8.0}{10.0}$
------	----------------------	-------	---------------------

+65	$\frac{+15.6}{11.9}$	+12.4	$\frac{+9.1}{10.3}$
-----	----------------------	-------	---------------------

1242	4391.00	$\frac{+12.5}{11.1}$	+9.7	$\frac{+7.7}{9.9}$
------	---------	----------------------	------	--------------------

Areas Cub. Yds.
Cut Fill Exc. Emb.

27.97 00 ^{52.9}

17.7 0.8

19.70 337

8.7

0.4

made from Cut opposite

27.06 00 ^{1.2}

66.6 Sta 12+38 to 0.5 to 12+42

92.75

Slips

7.0

Exc 2021.8 Cub. Yds.

2631 Class Slips L.R. 88.8 C.Y.

125.80

Balance Solid R. 1933.0

265.4

160.78

Slips

28.9

Have 59. So free

323.5 " 1020 from 1240 + 30636 + 90 = 3470.

188.55

" 790.9 " 1241 + 55% 44 + 90 = 1860

Total Have 5330.

511.6

236.44

Slips

52.9

271.6

182.65

1869.9

151.9 = 7 1/10 SG.

2021.8

2650

6120

SECTION 24

Ditches

1201 to 1204+90	Side Ditch on R.	} 65.1 Cu. Yd. Earth
1200 to 1204+90	" " " L	
1198+60 to 1200	Slope Ditch on L 1 x 3 x 140	15.5 " " Est.
		80.6 C.Y. Est.

Box Culverts

1227+52 ~ 2' x 3' x 51'	inside	1837' 13.17.	✓	✓
1218+32 ~ 1 x 1 1/2 x 36	"	693'	✓	✓
1193+49 ~ 2 x 2 1/2 x 42	"	1381'	✓	✓
3911 F.B.M.				

Clearing

1192+50 to 1195+50 ~ 150 x 300 = 10.3 Acres.

27

Earth

7.

1/2

0

SECTION 24

PAGE	Acres Cleared	Excavation ~ Cu. Yds.			Total Empt' Cu. Yds.
		Total in Cut Earth	Loose Rock	Solid Rock	
16		698.7 ✓	44.7 ✓	654.0 ✓	
17					5457.4
18		1868.0 ✓	671.0 ✓	1197 ✓	
19					1553.4
20		628.0 ✓		628.0 ✓	
21					1830.5 ✓
22		3128.0 ✓	285.3 ✓	93.3 ✓	
23					7259.5 ✓
24		1581.0 ✓		22.9 ✓	
25					5523.0 ✓
26					1.2 ✓
26		2021.8 ✓		88.8 ✓	
27	1.03 ✓	80.6 ✓	80.6 ✓	1933.0 ✓	
		103 ✓	10006.1 ✓	1036.9 ✓	267.2 ✓
				8702.0 ✓	21625.0 ✓

SECTION 24 - COST.

ACRES CLEARING.	1.03 ACRES	@	\$ 35.00	=	\$ 3605
EXCAVATION, EARTH,	1036.9 CU. YDS.	"	0.14	=	145.17
"	L. ROCK 267.2	" " "	0.32	=	85.50
"	S. ROCK. 8702.0	" " "	0.85	=	7396.70
BORROW, EARTH	6556.6	" " "	0.12	=	786.79
"	L. ROCK. 2561.7	" " "	0.30	=	768.51
HAULED 100 FT.	34460	" " "	0.01½	=	516.90
LUMBER, FT., B.M.	3911	"	\$ 12.00	=	46.93
TOTAL					\$ 9782.55

SUMMARY

Cu.Yds. Emb'k't made from Cuts	Cu.Yds. Shrinkage deducted	Borrow- Earth	Cu.Yds. Loose Rock	Cub.Yds. Hauled 100'	F.B.M. Lumber in Culverts
---	----------------------------------	------------------	--------------------------	----------------------------	------------------------------------

1252.4	210.2	3994.8		1260	
--------	-------	--------	--	------	--

1553.4				9160	
--------	--	--	--	------	--

1830.5				920	
--------	--	--	--	-----	--

3958.6	165.0	1568.0	1567.9	10880	
--------	-------	--------	--------	-------	--

3430.7	104.7	993.8	993.8	2550	
--------	-------	-------	-------	------	--

1.2

5330.

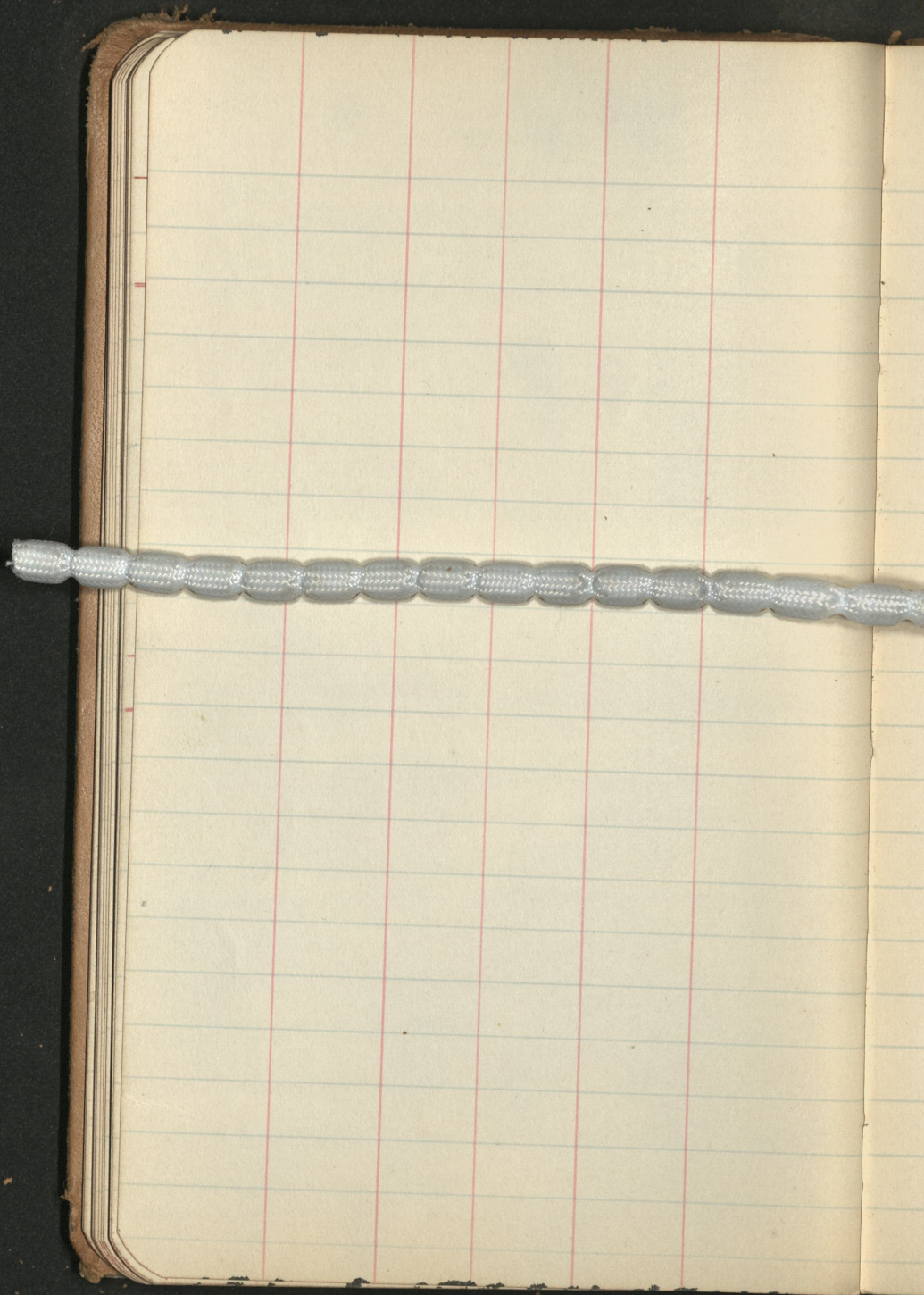
6120

3911.

12026.8	479.9	6556.6	2561.7	33670.	3911
---------	-------	--------	--------	--------	------

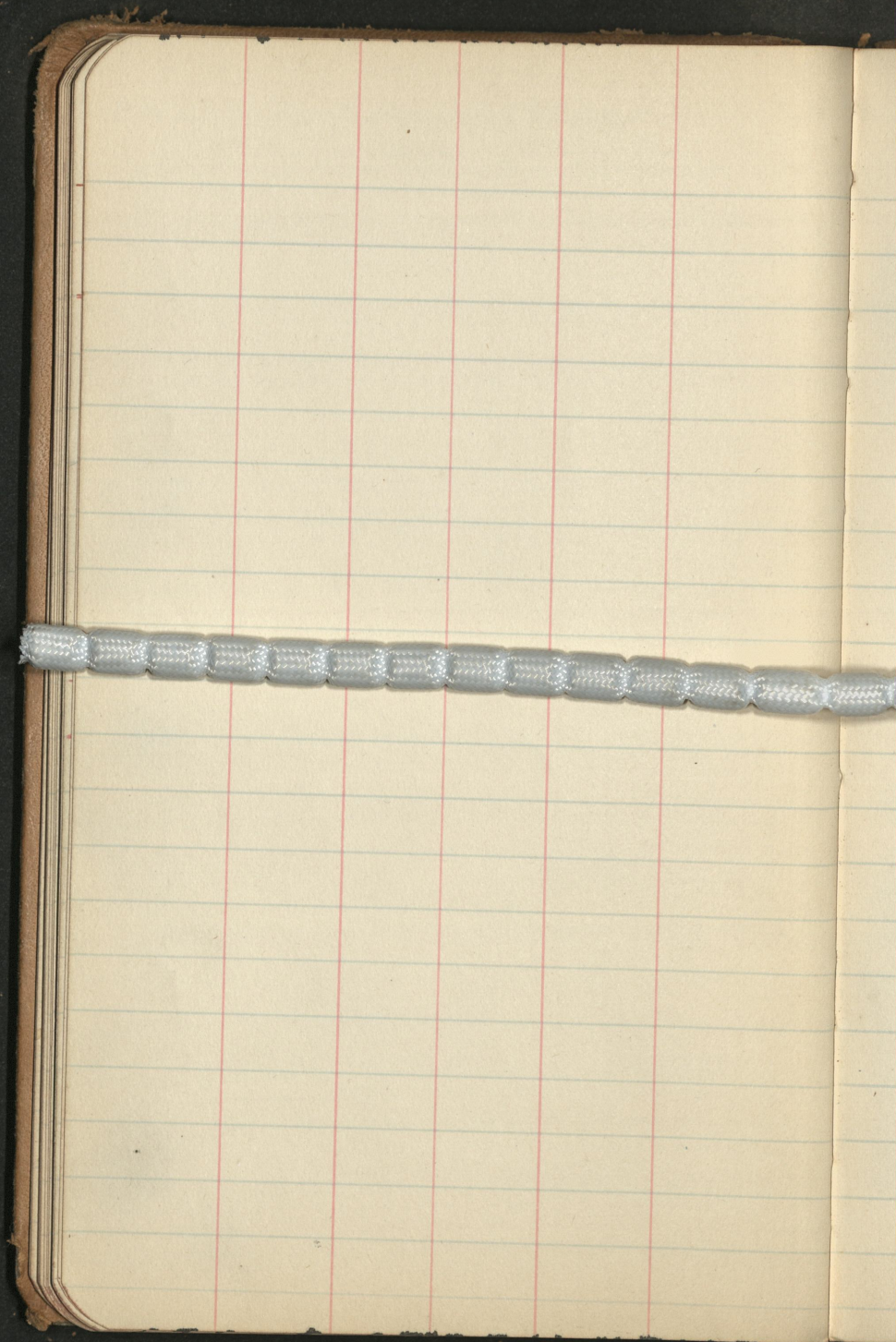
34460

790



29







SECTION 25

Station	Grade	L	C	R
1242	0. 4391.00	$\begin{array}{r} +12.5 \\ \hline 11.1 \end{array}$	+9.7	$\begin{array}{r} +7.7 \\ \hline 9.9 \end{array}$
+50		$\begin{array}{r} +10.5 \\ \hline 10.6 \end{array}$	+7.5	$\begin{array}{r} +5.9 \\ \hline 9.5 \end{array}$
1243		$\begin{array}{r} +5.5 \\ \hline 9.4 \end{array}$	+4.1	$\begin{array}{r} +2.4 \\ \hline 8.6 \end{array}$
+25		$\begin{array}{r} +2.2 \\ \hline 8.6 \end{array}$	+1.2	$\begin{array}{r} 0.0 \\ \hline 8.0 \end{array}$
+40	0. 0.	$\begin{array}{r} 0.0 \\ \hline 8.0 \end{array}$	-1.0	$\begin{array}{r} -2.2 \\ \hline 10.3 \end{array}$
1244		$\begin{array}{r} -5.7 \\ \hline 15.6 \end{array}$	-8.4	$\begin{array}{r} -12.0 \\ \hline 25.0 \end{array}$
+50		$\begin{array}{r} -9.5 \\ \hline 21.3 \end{array}$	-12.4	$\begin{array}{r} -18.1 \\ \hline 34.2 \end{array}$
1245		$\begin{array}{r} -12.1 \\ \hline 25.2 \end{array}$	-14.8	$\begin{array}{r} -20.8 \\ \hline 38.2 \end{array}$
+25		$\begin{array}{r} -13.6 \\ \hline 27.4 \end{array}$	-16.4	$\begin{array}{r} -20.8 \\ \hline 38.2 \end{array}$
+50	4391.00	$\begin{array}{r} +12.3 \\ \hline 25.5 \end{array}$	-15.5	$\begin{array}{r} -19.8 \\ \hline 36.7 \end{array}$

Areas Cub. Yds.
Cut Fill Exc. Emb.

31

182.65

Sta 124 to 124.3 + 40 Exc. 617.6 Cy.

299.7 Class Slip L.R. 40.9 "

140.98

Slips

40.9

Balance Solid Rock 576.7 "

193.9 Haul 128.4 N. free

68.50

" 450 from 124.3 + 124.3 + 40 = 990.0

40.4

18.76

0.0

3.5

3.1

0.0

10.85

578.4

39.2 1/2 55.

617.6

277.0

232.47

Sta 124.3 + 125 to 124.7 + 15

623.3 Emb. 4556.0 Cy.

440.70

301.9. Made from

949.1 Cuts at ends

584.31

Balance 15270 Cy.

less 5% 763 "

575.3 Borrowed 1450.7 "

658.32

Class 1/2 Ea = 725.3 "

1/2 L.R. = 725.4 "

580.0

1/2 Hauled 150 = 1090.

594.40

887.6 1/2 Haul

3895.4

Station	Grade	L	O	R
12 1246	4391.00	$\frac{-8.8}{2.02}$	-11.4	$\frac{-14.8}{29.2}$
	+60	$\frac{-6.3}{16.5}$	-8.9	$\frac{-12.4}{35.6}$
12 1247	+10	$\frac{0.0}{8.0}$	-0.4	$\frac{-0.8}{8.2}$
	+15	$\frac{+1.0}{8.3}$	+0.5	$\frac{0.0}{8.0}$
	+50	$\frac{+6.0}{9.5}$	+5.3	$\frac{4.6}{9.2}$
12 1248		$\frac{+9.7}{10.4}$	+8.6	$\frac{+7.5}{9.9}$
	+50	$\frac{+9.4}{10.4}$	+8.3	$\frac{+7.1}{9.8}$
12 1249		$\frac{+8.3}{10.1}$	+7.0	$\frac{+5.6}{9.4}$
12 1250		$\frac{+4.7}{9.2}$	+3.8	$\frac{+2.8}{8.7}$
	+80	$\frac{+2.0}{8.5}$	+1.1	$\frac{0.0}{8.0}$
	4391.00			

Areas Cub. Yds.
Cut Fill Exc. Emb

3845.4

364.18

68.5

685.5

252.80

339.1

239.7

0.0

604

0.5

0.4

8.08

0.0

4841.0

265.0

Deduct from Slope

64.8

4556.0

Stands 13 1/8 to 1

91.96

Sta 1247 + 10 to 1251 + 20

229.7

Exc 1531.7 Cuyds.

511.0

14.6

156.09

Class Slip L.R. 5.1 Cuyds.

283.3

" Balance of
Cut Solid Rock 1480.6 + "

149.83

Haul 123.0 to free

Slips

32.1

36.2 N."

253.4

300 from 1247 to 564 + 40 = 435

123.85

900. 1249 to 53 + 25 = 3825

Slip

4.4

Total Haul

4260

347.9

64.01

4290

120.1

17.08

0.0

8.4

8.3

1359.2

172.5 3/4 5.4

1531.7

Station Grade.

L

C

R

1251+20 4391.00

0.0
8.0

-1.0

-2.2
10.3

1252

-1.8
9.7

-2.8

-5.2
14.8

1253

-5.4
15.1

-6.8

-10.3
22.5

1254

-10.4
22.6

-12.6

-15.4
30.1

+50.0

-15.3
30.0

-15.8

-19.1
35.7

1255

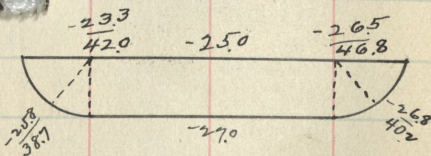
-18.3
34.5

-23.1

-25.6
45.4

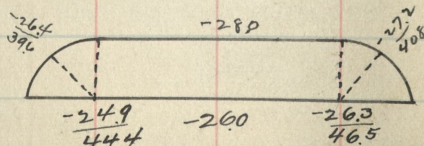
+16 H.B

+57 Toe



1256+06 Toe

1256+48 4391.00 H.B



Areas Cub. Yds.
Cut Fill Exc. Emb.

00.00 16.85

83

Sta 1250+80 to 1251+57

1121 Emb'd 5971.4 Cy.

0 5880

1582.3 made from

447.4 Cut So.

182.79

Balance 4389.1

less 5% 219.5

1120.6

Borrow 4169.6

422.31

Borrow on L1257
100 yds Lo. R.

983! B.P. 280 R 1256+10-

900 Yds Earth

639.43

Pit inside haul limit
on R 749 Cy. class

1588.8 25% Lo. R 187.2

75% E 561.8

1076.50

Pit beyond haul limit

699.5 on R 1254 = 2420 Cy.

class 15% Lo. R = 363.

85% Ea = 2057.

1284.30

1011.6 Total Earth 3518.8 Cy.

5971.4 "Loose R 6598"

Have 900 yds 520 = 4680.

" 2420 " 280 = 6780.

" 100.6 " 300 = 300

1097.1 Total Haul 11760.

1360.90

2457.8 Allow 100. Yds Ea Borrow
to cover racks for Fresno
Road

3554.9

Station Grade

1257 4391.00

L	C	R
-22.8		-24.8
41.2	-24.0	44.2

+50

-21.4		-23.0
39.1	-22.2	41.5

1258

-19.4		-18.9
36.1	-20.2	35.4

+50

-15.7		-17.4
30.6	-16.2	33.1

1259

+2.00

-11.4		-13.9
24.1	-13.2	27.9

12

+40

-5.6		-8.0
15.4	-8.0	19.0

+75

0.0		-1.2
8.0	-0.5	8.8

12

+80

+0.7		0.0
8.2	+0.2	8.0

1260

+3.1		+1.2
8.8	+2.3	8.3

+50 4398.00

+5.7		+3.9
9.4	+4.7	9.0

Areas	Cub.	Vds.
Cut Fill	Exc.	Emb.

35549

1191.40

20754

1050.06

Sta 1256+06 to 1259+80

1765.1 Emb'd 10341.0 @ 4.

85620

735.0 made from

1377.8 Cut North

631.82

balance 9606.0 @ 4.

984.8	less 5%	<u>480.3</u>	"
	Borrowed	9125.70	

43175

Class 5% L.R. 456.2

457.0 95% Ea 8669.5

185.20

Haul 2570 Yds 180'
= 4630

125.5 1180 Yds 210' = 2480

0.0

8.40

Total Haul 7110.

0.3

0.5

4.42

0.0

10341.0

15.3

3686

109.7

8164

160.1

285.4

Station Grade

L

C

R

1261

4399.00

+6.0
9.5

+5.3

+4.5
9.1

+50

+4.9
9.2

+3.7

+2.7
8.7

12

1262

+2.3
8.6

+1.5

+0.8
8.2

+15

+1.6
8.4

+0.9

0.0
8.0

+60

+2.00

0.0
8.0

-0.7

-1.4
9.1

12

1263

-1.0
8.5

-1.8

-2.6
10.9

+50

-1.7
9.6

-2.5

-3.5
12.3

12

1264

-2.6
10.9

-3.8

-4.2
13.3

+08 B.C. 10" x 2' x 21' inside
Put in by Tisdale

+50

-3.0
11.5

-3.6

-4.4
13.6

1265

4407.00

-3.0
11.5

-3.7

-4.4
13.6

Areas	Cub. Yds.	
Cut Fill	Exc. Emb.	
9129	285.4	Sta 1259+75 to 1262+60 Exc. 607.2 Cy.
	143.3	Class Solid Rock 607.2 Cy.
63.52		Haul 60 ft from
	82.0	" 1232 So "
2500		" 400 from 1261+15 to 59+15 = 800. Haul
	10.8	
1378	0.0	
	7.7	6.0
0.0	10.88	529.2
		78.0 W.S.
		607.2
		30.3
30.06		Sta 1262+15 to 1268+15
		70.1 Emb. 999.5 Cy.
4558		268.8 made from
	106.8	Cuts
6978		balance 730.7
		less 5% 36.5
		Borrow 694.2 Cy.
	130.4	Class earth
7108		
	132.8	
7234		
	134.6	
		611.0

Station Grade

1265+50 4408.00

L	C	R
$\frac{-2.9}{11.4}$	-3.8	$\frac{-4.4}{13.6}$

1266

$\frac{-2.5}{10.8}$	-3.3	$\frac{-4.1}{13.2}$
---------------------	------	---------------------

+80

$\frac{-2.0}{10.0}$	-2.6	$\frac{-2.9}{11.4}$
---------------------	------	---------------------

1268

$\frac{0.0}{8.0}$	00	$\frac{-0.4}{7.6}$
-------------------	----	--------------------

+15

+2.00

$\frac{+0.3}{8.1}$	+0.2	$\frac{0.0}{8.0}$
--------------------	------	-------------------

1269

$\frac{+2.6}{8.7}$	+2.2	$\frac{+1.7}{8.4}$
--------------------	------	--------------------

1270

$\frac{+5.2}{9.3}$	+3.8	$\frac{+3.2}{8.8}$
--------------------	------	--------------------

1271

$\frac{+4.8}{9.2}$	+3.4	$\frac{+2.7}{8.7}$
--------------------	------	--------------------

+40

$\frac{+4.7}{9.2}$	+3.2	$\frac{+2.2}{8.6}$
--------------------	------	--------------------

1272

4421.00

$\frac{+10.1}{10.5}$	+9.1	$\frac{+7.0}{9.8}$
----------------------	------	--------------------

Areas Cub. Yds.
Cut Fill Exc. Emb

611.0

730.5

125.7

62.70

159.5

449.7

103.0

0.0

1.40

0.5

0.3

281

0.0

999.5

61.1 Sta 1268 to 1273 + 15.4 = 1299.5 Cy.

360.1

1268 to 1271 + 10 = 513.5 Cy.

192.6

Class 1/3 Lo R = 171.2 "
2/3 Earth = 342.3 "

67.99

Balance of Cut

Class Solid Rock = 786.0 Cy.

237.8

60.43

Have 38.9 So far

" 70.6 " "

86.3

" 200 ftm / 26.9 + 40.0 / 26.6 + 6.5 = 55.0.

56.08

" 87.0 " / 27.1 + 70.0 / 27.4 + 7.0 = 261.0.

Total haul

316.0

241.0

160.77

294.1

1113.4

Station	Grade	L	C	R
1272	+65 4422.30	$\frac{+6.7}{9.7}$	+4.6	$\frac{+3.5}{8.9}$
1273	+05	$\frac{+0.8}{8.2}$	+0.2	$\frac{0.0}{8.0}$
	+15	$\frac{0.0}{8.0}$	+0.5	$\frac{-1.3}{9.0}$
	+45	$\frac{-1.9}{9.9}$	-3.0	$\frac{-4.7}{14.1}$
1274	+2.00	$\frac{-2.7}{11.1}$	-4.1	$\frac{-6.9}{17.4}$
	+55	$\frac{-5.1}{14.7}$	-7.5	$\frac{-11.6}{24.4}$
1275		$\frac{-3.9}{12.9}$	-7.0	$\frac{-12.6}{25.9}$
	+45	$\frac{-5.9}{15.9}$	-10.6	$\frac{-16.8}{32.2}$
1276		$\frac{-13.5}{27.3}$	-15.2	$\frac{-17.3}{33.0}$
	+15	$\frac{-15.5}{30.3}$	-17.0	$\frac{-17.0}{32.5}$

1276+65 B.C. | x2 x41 inside

Ards	Cub. Yds.
Cut Fill	Exc. Emb.

83.58

1113.4

655

4.82 0.0

0.6 1.1

0.0 880

1179.5

120.0 59.171+10
to 1273+10

1299.5

37.7

59.10

Sta 1273+05 to 1277+85

154.0 Emb'd 3937.5 Cy.

92.03

3329.7 made from

3026 Cuts at ends

205.08

Balance 607.8 Cy.

less 5% 30.4 "

332.2

Borrow 577.4 "

193.55

Class 1/2 Ea 288.7 "

439.9 1/2 Lo.R. 288.7 "

334.38

917.1

566.08

337.1

647.55

1249.4

Lumber 971 'arr.

3771.1

Station Grade

1277

4431.00

L	C	R
$\frac{-7.3}{18.0}$	-5.9	$\frac{-5.9}{15.9}$

+45

$\frac{-2.4}{10.6}$	-1.8	$\frac{-1.3}{9.0}$
---------------------	------	--------------------

+75

$\frac{-0.2}{7.3}$	-0.3	$\frac{0.0}{8.0}$
--------------------	------	-------------------

+85

$\frac{0.0}{8.0}$	+0.2	$\frac{+0.5}{8.1}$
-------------------	------	--------------------

1278 + 47

42.00

$\frac{+4.4}{9.1}$	+3.6	$\frac{+2.7}{8.7}$
--------------------	------	--------------------

1279

$\frac{+7.1}{9.8}$	+5.5	$\frac{+5.2}{9.3}$
--------------------	------	--------------------

+36

$\frac{+7.7}{9.9}$	+6.8	$\frac{+6.0}{9.5}$
--------------------	------	--------------------

+86

$\frac{+8.4}{10.1}$	+7.3	$\frac{+6.4}{9.6}$
---------------------	------	--------------------

1280 + 36

$\frac{+9.3}{10.3}$	+8.5	$\frac{+7.7}{9.9}$
---------------------	------	--------------------

+50 4438.00

+86

$\frac{+9.8}{10.5}$	+9.0	$\frac{+8.0}{10.0}$
---------------------	------	---------------------

Areas Cub. Yds.
Cut Fill Exc. Emb

14620

3771.1

1473

30.59

18.7

0.0 300

0.4 0.4

3.61 00

39375

73.5 Sta 1277+75 to 1284

60.44

Exc 2194.4 Cub Yards.

159.2 Closed % Ca = 5486 C.Y.

101.73

25% to R = 5486 "

50% Solid Rock = 1097.2 "

1483

130.76

Have 388 So. for

" 25.6 R. "

2332 " 1870. from 1280 + 50% 76 x 30 = 7854

131.11

" 190 " 1282 + 60% 1284 + 80 = 426

" 70 into Road Xing 300' = 210

2639 Total Have

8490

153.85

2938

163.45

304.8

1477.1

Station Grade

L C R

1281 + 36 $\begin{array}{r} +98 \\ 10.5 \end{array}$ +9.1 $\begin{array}{r} +8.2 \\ 10.1 \end{array}$

+86

$\begin{array}{r} +9.4 \\ 10.4 \end{array}$ +8.3 $\begin{array}{r} +7.0 \\ 9.8 \end{array}$

1282 4438.00

1282 + 36

$\begin{array}{r} +6.9 \\ 9.7 \end{array}$ +6.1 $\begin{array}{r} +5.2 \\ 9.3 \end{array}$

+86

$\begin{array}{r} +3.9 \\ 8.9 \end{array}$ +2.5 $\begin{array}{r} +1.4 \\ 8.4 \end{array}$

1283 + 20

$\begin{array}{r} +2.0 \\ 8.5 \end{array}$ +0.9 $\begin{array}{r} +0.5 \\ 8.1 \end{array}$

+40

$\begin{array}{r} +1.2 \\ 8.3 \end{array}$ +0.4 $\begin{array}{r} 0.0 \\ 8.0 \end{array}$

+65

$\begin{array}{r} +0.5 \\ 8.1 \end{array}$ 0.0 $\begin{array}{r} -1.0 \\ 8.5 \end{array}$

1284

$\begin{array}{r} 0.0 \\ 8.0 \end{array}$ -1.8 $\begin{array}{r} -3.1 \\ 11.7 \end{array}$

+72 4429.84

$\begin{array}{r} -2.0 \\ 10.0 \end{array}$ -2.4 $\begin{array}{r} -3.2 \\ 12.7 \end{array}$

1285

$\begin{array}{r} -2.1 \\ 10.2 \end{array}$ -3.0 $\begin{array}{r} -3.8 \\ 12.7 \end{array}$

Area	Cub. Yds.
Cut Fill	Exc. Emb.

165.73	1479.1
--------	--------

291.8

149.43

236.9

106.35

136.6

41.32

37.0

17.47

9.4

806 0.0

4.7 1.1

2.06 3.50

Sta 1283 + 40 to 1285 + 95

0.9 20.8 Emb. bit 247.9 C.Y.

0.0 28.58 2194.4

Made from Cut So.

98.7

45.44

55.00

52.1 Sta 1285 Emb. in Road Xing 80.4 C.Y.

69.1 Made from Cut So.

241.8

Station Grade

L O R

1285+50 4427.75

$\frac{0.0}{8.0}$ -1.4 $\frac{-2.0}{10.0}$

+75

$\frac{+2.7}{8.7}$ +1.5 $\frac{0.0}{8.0}$

1286

$\frac{+3.5}{8.9}$ +2.1 $\frac{+0.8}{8.2}$

+50

$\frac{+3.8}{9.0}$ +2.7 $\frac{+1.9}{8.5}$

1287

$\frac{+1.0}{8.3}$ +0.4 $\frac{0.0}{8.0}$

+15

$\frac{-0.0}{8.0}$ -0.4 $\frac{-1.1}{8.7}$

+50

$\frac{-0.4}{9.6}$ -0.4 $\frac{-1.4}{9.1}$

+60

$\frac{0.0}{8.0}$ -0.5 $\frac{-1.1}{8.7}$

1288

$\frac{+0.2}{8.1}$ 0.0 $\frac{-0.6}{7.9}$

+50

$\frac{+0.6}{8.2}$ +0.3 $\frac{0.0}{8.0}$

1289

4418.37

$\frac{+1.8}{8.5}$ +1.2 $\frac{+0.9}{8.2}$

Areas.	Cub. Yds.		
Cut Fill	Exc. Emb.		
00	1960		241.8
		7.2	6.1
2333	00		247.9
		27.1	Sta 1285+50 to 1287+15
3515			Exc 246.8 Cub. Solid Rock
		75.5	Have 248 North from
46.42			4136 from 1286+25 to 1293+35 = 970 ft
		49.7	
726	00		
		1.3	1.3
0.0	7.19	160.8	
		86.0	54. Sta 1287 to 1288+50
		246.8	14.2 Cub 28.5 made from Cut So.
	1465		
			4.2
0.0	803		
		0.4	7.5
080	210		
		5.2	1.3
483	00		28.5
2082		23.8	
		57.0	
		86.4	

SECTION 25

Station	Grade	L	C	R
1289	+50	$\frac{+3.2}{8.8}$	+2.4	$\frac{+1.8}{8.5}$
1290		$\frac{+3.6}{8.9}$	+3.0	$\frac{+2.2}{8.6}$
	+50	$\frac{+2.6}{8.7}$	+2.1	$\frac{+1.6}{8.4}$
1291		$\frac{+0.9}{8.2}$	+0.5	$\frac{0.0}{8.0}$
	+50	$\frac{0.0}{8.0}$	-0.8	$\frac{-1.5}{7.3}$
1292		$\frac{-1.0}{8.5}$	-1.7	$\frac{-2.5}{10.8}$
	+30	$\frac{-1.3}{9.1}$	-2.1	$\frac{-3.0}{11.5}$
	+32 ⁴			
	4409.46			
1293		$\frac{-3.2}{11.8}$	-4.1	$\frac{-4.8}{14.2}$
1294		$\frac{-3.9}{12.9}$	-5.2	$\frac{-7.3}{18.1}$
1295		$\frac{-2.9}{11.4}$	-3.8	$\frac{-5.4}{15.1}$

-2.68

-2.74

Cut Fill Cub Yds.
Exc Emb.

40.76

86.4

Sta 1289+60 to 1291+50

83.5 Exc 291.9 Cu Yds

49.45

Class 75% Lo Rock. = 73.0 Cu

75% Earth = 218.9 "

78.0

Haul 21.9 Cu. from

34.75

" 290 from 1291+50 to 1292+75 = 530 Haul

39.3

76.5

00

47

7.5

Sta 1291 to 1295

0.0

1217

291.9

Emb'd. 995.8

37.8

492.2 made from
Cuts South balance
less 5% borrow
= 459.4 Cu. yds.

28.66

36.3

class 15% Lo R = 68.9
85% E = 390.5

3668

152.9

81.30

372.4

119.80

368.9

79.40

995.8

SECTION 25

Ditches

Stations	Size	Earth	Lo Rock	Solid R.
1268 to 1271+10 Side Ditch R & L		30.6	15.3	
1277+70 to 1283+70 " " " "		16.3	24.2	48.3
1288 to 1291+50 " " " "		34.5	17.3	
1277+10 to 1293+60 Surf Ditch on L				
1.0 x 3.5 x 450		29.2	29.1	
1.3 x 4.0 x 250	}			
1.8 x 4.0 x 100		24.9	49.9	
1.8 x 4.0 x 100				26.7
1.8 x 4.5 x 750		168.8	56.2	
		304.3	192.0	75.0

Clearing

1269 to 1274 ~ 60' wide	30000	□'
1274 " 1277 - 160 "	48000	
1277 " 1284 70 "	49000	
1284 " 1288 60 "	24000	
B. Bits at 1256 300 x 430	129000	
250 x 300	75000	
8.15 Acres =	355000	□'

42

Solid R

48.3

26.7

75.0

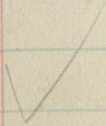
SECTION 25

PAGE	Acres Clearing	Excavation - Cub. Yards.				Total in Banks Cu. Yds.
		Total in Cuts	Earth	Loose Rock	Solid Rock	
31		617.6		40.9	576.7	
31						4556.0
32		1531.7		51.1	1480.6	
33						5971.4
33						100.0
34						10341.0
35		607.2				
35					607.2	
36		1299.5	342.3	171.2	786.0	999.5
37						
38		2194.4	548.6	548.6	1097.2	3937.5
39						247.9
39						80.4
40		246.8			246.8	
40						28.5
41		291.9	218.9	73.0		
41						
42	8.15	571.3	304.3	192.0	75.0	975.8
	8.15	7360.4	1414.1	1096.8	4869.5	27238.0

SUMMARY

Cu.Yds. Bank made from cuts	Cu.Yds. Shrinkage deducted	Borrow Earth	Cu.Yds. Loose Rock	Cu.Yds. Hauled 100'	F.B.M. Lumber in Culverts
				990.	
3029.0	76.3	725.3	725.4	1090	
				4260	4290
1582.3	219.5	3518.8	650.8	11760	
		100.0			
735.0	480.3	8669.5	456.2	7110	
				800.	
268.8	36.5	694.2			
				3160	
3329.7	30.4	288.7	288.7	8490	971
2479					
804					
				970.	
285					
				530.	
492.2	24.2	390.5	68.9		
9793.8	867.2	14387.0	2190.0	39160.	971

39190



SECTION 25 - COST.

3	ACRES CLEARING,	8.15	@	\$ 35 ⁰⁰	=	285.25
3	EXCAVATION, EARTH,	1414.1 CU. YDS.	@	0.14	=	197.97
3	" L. ROCK	1076.8	" " "	0.32	=	344.58
3	" S. ROCK	4869.5	" " "	0.85	=	4139.07
3	BORROW, EARTH	14387	" " "	0.12	=	1726.44
3	" L. ROCK	2190.0	" " "	0.30	=	657.00
3	HAULED, 100 FT.	39190	" " "	0.01 $\frac{1}{2}$	=	587.85
3	LUMBER,	971	FT. B.M.	\$ 12 ⁰⁰	=	11.65
	TOTAL =					\$ 7949.81

285.25

197.97

344.58

4139.07

1726.44

657.00

587.85

11.65

949.81

211

31

31

31

31

31

31

31

31

31

31

31

31

31

31

31

31

31

31

31

31

31

31

31

31

31

31

31

31

31

31

31

31

31

31

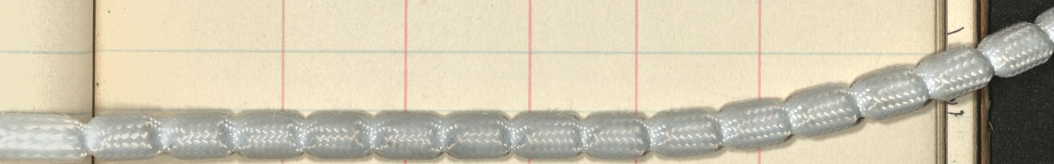
31

31

31

31

45



0

g.

p.

.

21

10

-

PAGE

31

31

32

33

33

34

35

35

36

37

38

39

40

40

41

41

42

46



10

29.

3.

.

29.

2.

PAGE

31

31

32

33

34

35

35

36

37

38

39

39

40

41

41

42

42

43

47

10
Cg.
No.
1.

Cal.
20
—

SECTION 26

Station	Grade	L	C	R
1295	4402.13	$\frac{-2.9}{11.4}$	-3.8	$\frac{-5.4}{15.1}$
+60		$\frac{-0.9}{8.4}$	-1.0	$\frac{-1.6}{9.4}$
1296+30		B.C. 2 x 3 x 30		
1296+35		$\frac{-3.8}{12.7}$	-4.9	$\frac{-5.3}{15.0}$
+70		$\frac{0.0}{8.0}$	-1.9	$\frac{-4.4}{13.6}$
1297+30	-2.74	$\frac{+1.6}{8.4}$	+0.3	$\frac{0.0}{4.0} \quad \frac{-0.8}{8.2}$
+85		$\frac{0.0}{8.0}$	-0.7	$\frac{-2.1}{10.2}$
1298+65		$\frac{-3.1}{11.7}$	-4.7	$\frac{-6.8}{17.2}$
1299		$\frac{-2.8}{11.2}$	-4.4	$\frac{-6.5}{16.8}$
+90		$\frac{-3.4}{12.1}$	-4.6	$\frac{-6.3}{16.5}$
1299+80		B.C. 1 x 2 x 30		
+80	4388.97	$\frac{-4.4}{13.6}$	-6.4	$\frac{-7.9}{18.9}$

Areas. Cub. Yds.
Cut Fill Exc. Emb.

48

79.40

1078

1765

163.0 1004 FRM. Lumber.

99.71

87.9

0.0 35.92

0.1 41.2

Sta 1297+70 to 1297+85

8.26 1.20

Exc 11.7 cu. L.R.

5.6 15.2

0.0 1372

11.7

1295 to 1301+45

Emb. 1240.7

172.3

1295 to 97+30 = 415.1

130 made from cut

at 97+30 balance

less 5% = 382.0

102.57

127.5 borrow 15% L.R. = 57.3

85% Ea = 324.7

94.15

1297+30 to 1314.5 = 825.6

447.6 from cut East

215.4 balance less 5% = 359.1

Borrow 1/3 L.R. = 119.7 cu.

7% Ea = 239.4 "

99.73

Total Borrow Earth = 564.14

L.R. = 177.0 "

91.4 588 Lumber

14705

94.4

1116.1

Station Grade

L

C

R

1300 4388.43

$\frac{-2.9}{11.4}$

-5.0

$\frac{-7.1}{17.7}$

+45

$\frac{0.0}{8.0}$

-1.0

$\frac{+3.3}{12.0}$

+85

$\frac{+2.3}{8.6}$

+1.3

$\frac{0.0}{8.0}$

1301+35

$\frac{+0.9}{8.2}$ $\frac{0.0}{4.0}$

-0.3

$\frac{-1.8}{9.7}$

+45

$\frac{+2.7}{8.6}$

+0.9

$\frac{0.0}{8.0}$

1302

$\frac{+5.2}{9.3}$

+4.3

$\frac{+3.5}{8.8}$

1303

$\frac{+5.5}{9.4}$

+4.4

$\frac{+3.3}{8.8}$

+40

$\frac{+6.1}{9.5}$

+6.4

$\frac{+5.2}{9.3}$

+70

$\frac{+5.3}{9.3}$

+4.0

$\frac{+3.1}{8.8}$

1304+10 4376.13

$\frac{+2.1}{8.5}$

+1.0

$\frac{0.0}{8.0}$

Areas Cub. Yds.
Cut Fill Exc. Emb

49

1116.1

10775

107.8

0.0

2155

9.9

10.6

1999

0.0

20.2

5.2

180

8.36

3.3

1.0

16.27

0.0

1240.7

91.9

1300 + 45 + 1304 + 40

73.93

Exc 702.8

class 40% Solid Rock = 281.1

60% Loose " = 421.7

276.2

7524

Haul 338 So from
" 87. N. "

+ 352 from 1302 + 30 + 99 + 75 = 900

133.8

" 230 " 3 + 30 + 5 + 15 = 400

276 haul 1300

10536

more estimated 4000

97.3

69.80

64.0

1665

0.0

6.2

7.9

702.8

7.9

Station Grade

L

C

R

1304+40 4375.23

0.0

8.0

-1.1

-3.0

11.5

1305

-5.1

14.7

-6.5

-8.3

19.5

+30

-6.5

16.8

-6.9

-8.1

19.2

+70

-9.3

21.0

-10.6

-9.5

21.3

+90

-3.00

-10.0

22.0

-10.7

-12.3

25.5

1306+25

-6.5

16.8

-8.0

-9.0

20.5

1306+40

B.C. 1x2x32

+75

-2.4

10.6

-2.8

-4.1

13.2

1306+95

0.0

8.0

-1.0

-2.0

10.0

1307+10

+1.0

8.3

+0.7

0.0

8.0

+50 4365.93

+4.6

9.2

+4.0

+3.3

8.8

Areas Cub Vds.
Cut Fill Exc. Emb

50

7

0.0 2122

1992 Sta 1304+10 to 1307+10

15805

Emb 1584.6 made

185.2 from cuts at lads.

17530

344.7

289.99

230.4

332.18

347.2

203.45

240.3 726' BM. Lumber

5607

267

0.0 1600

1.8 3.0

9.71 00

1584.6

57.3

6760

160.2

2193

20

15
Exc

+10
Cg.

So.
N.

56.4
30.0

Station Grade

1308 4364.43 $\begin{array}{r} +7.3 \\ 9.8 \end{array}$ $\begin{array}{r} +6.0 \\ \end{array}$ $\begin{array}{r} +4.8 \\ 9.2 \end{array}$

+30 $\begin{array}{r} +8.5 \\ 10.1 \end{array}$ $\begin{array}{r} +7.0 \\ \end{array}$ $\begin{array}{r} +5.9 \\ 9.5 \end{array}$

1309 4325 $\begin{array}{r} +8.3 \\ 10.1 \end{array}$ $\begin{array}{r} +7.2 \\ \end{array}$ $\begin{array}{r} +6.1 \\ 9.5 \end{array}$ ✓

+50 $\begin{array}{r} +6.0 \\ 9.5 \end{array}$ $\begin{array}{r} +4.9 \\ \end{array}$ $\begin{array}{r} +3.7 \\ 8.9 \end{array}$

1310 + 08 -3.00 $\begin{array}{r} +3.2 \\ 8.8 \end{array}$ $\begin{array}{r} +2.3 \\ \end{array}$ $\begin{array}{r} +1.5 \\ 8.4 \end{array}$

+70 $\begin{array}{r} +0.2 \\ 8.1 \end{array}$ $\begin{array}{r} 0.0 \\ \end{array}$ $\begin{array}{r} 0.0 \\ 8.0 \end{array}$

+75 $\begin{array}{r} 0.0 \\ 8.0 \end{array}$ $\begin{array}{r} -0.6 \\ \end{array}$ $\begin{array}{r} -0.4 \\ 7.6 \end{array}$

1311 + 10 $\begin{array}{r} -2.2 \\ 10.3 \end{array}$ $\begin{array}{r} -2.7 \\ \end{array}$ $\begin{array}{r} -3.2 \\ 11.8 \end{array}$

+40 $\begin{array}{r} -1.6 \\ 9.4 \end{array}$ $\begin{array}{r} -2.0 \\ \end{array}$ $\begin{array}{r} -2.4 \\ 10.6 \end{array}$

+

+85 4352.88 $\begin{array}{r} -4.9 \\ 14.4 \end{array}$ $\begin{array}{r} -5.7 \\ \end{array}$ $\begin{array}{r} -4.1 \\ 13.2 \end{array}$

Areas. Cub Yds
Cut Fill Exc. Emb.

105.40

219.3

Sta 1306+95 to 1310+95

128.7 Exp 1050.7 Cu yd

126.20

Class 60% L.R. = 630.4 Cy.

40% S.R. = 420.3 "

329.7

128.16

Haul 22 ft from

196.3 " 98.5 So. "

83.88

" 950 from 8+75 to 5+85
= 275 Haul

131.5

38.58

45.1

Sta 1310+70 to 1313

8.0

0.0

Emb 329.6 Cy.

0.1

0.4 72.0 yds made from cuts

0.0

6.08

1050.7

65.2 from Ditch 1312-1314

35.5

balance less 5% = 182.8 borrow

48.73

Class 1/2 Ea = 91.4 Cy.

46.0

1/2 L.R. = 91.4 "

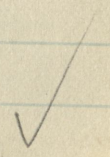
34.00

120.1

110.16

57.7

259.7



SECTION 26

Station	Grade	L	C	R
1312	4352.43	$\frac{-2.8}{11.2}$	-4.6	$\frac{-6.6}{16.9}$
+20		$\frac{0.0}{8.0}$	-0.6	$\frac{-4.1}{13.2}$
+30		$\frac{+0.8}{8.2}$	0.0	$\frac{-2.3}{10.5}$
+60		$\frac{0.0}{8.0}$	-0.2	$\frac{-0.5}{7.8}$
+75	0.00	$\frac{-0.9}{8.4}$	-1.3	$\frac{-1.2}{8.8}$
+95		$\frac{0.0}{8.0}$	0.0	$\frac{-0.4}{7.6}$
1313		$\frac{+0.6}{8.2}$	+0.2	$\frac{0.0}{8.0}$
+20		$\frac{+4.3}{8.1}$	+4.0	$\frac{+3.4}{8.9}$
+50		$\frac{0.0}{8.0}$	0.0	$\frac{0.0}{8.0}$
+55	4347.78	$\frac{-0.6}{7.9}$	-0.6	$\frac{-0.6}{7.9}$

Areas Cub Yds.
Cot Fill Exc. Emb

52

97.53

259.7

43.8

0.0

20.71

0.4

5.5

320

920

1.2

7.0

13 1/4 + 20 + 13 1/4 + 60

Exc 16 LOR

0.0

3.33

1.6

6.1

18.53

7.4

0.0

1.40

0.2

0.1

13 1/2 + 9 1/2 + 13 + 50

Exc 61.7

Exc 30.8 C.Y.

LOR 30.9 "

4.02

0.0

329.6

hauled South
small 10%.

25.5

64.80

360

0.0

0.0

61.7

0.8

894

279.3

280.1

Station	Grade	L	C	R
1313+95	4346.58	$\begin{array}{r} -8.9 \\ 204 \end{array}$	-118	$\begin{array}{r} -14.2 \\ 28.3 \end{array}$
1314+15		$\begin{array}{r} -10.8 \\ 23.2 \end{array}$	-111	$\begin{array}{r} -10.5 \\ 22.8 \end{array}$
+40		$\begin{array}{r} -3.4 \\ 12.1 \end{array}$	-36	$\begin{array}{r} -3.4 \\ 12.1 \end{array}$
+65		$\begin{array}{r} -0.2 \\ 7.3 \end{array}$	0.0	$\begin{array}{r} +0.2 \\ 8.1 \end{array}$
+70		$\begin{array}{r} 0.0 \\ 8.0 \end{array}$	0.0	$\begin{array}{r} +0.3 \\ 8.1 \end{array}$
+95		$\begin{array}{r} +0.9 \\ 8.5 \end{array}$	+1.2	$\begin{array}{r} +1.1 \\ 8.3 \end{array}$
1315+15		$\begin{array}{r} 0.0 \\ 8.0 \end{array}$	+0.5	$\begin{array}{r} +1.2 \\ 8.6 \end{array}$
+55		$\begin{array}{r} -8.4 \\ 19.6 \end{array}$	$\begin{array}{r} -8.4 \\ 15.0 \end{array}$ -2.2	$\begin{array}{r} 0.0 \\ 8.0 \end{array}$
1316		$\begin{array}{r} -11.4 \\ 24.1 \end{array}$	$\begin{array}{r} -8.6 \\ 16.0 \end{array}$ -8.8	$\begin{array}{r} -4.4 \\ 13.6 \end{array}$
+50	4338.93	$\begin{array}{r} -10.8 \\ 23.2 \end{array}$	-8.4	$\begin{array}{r} -4.7 \\ 14.1 \end{array}$

Areas Cub Yds
Cut Fill Exc. Emb.

53

			280.1	1313+50% 1314+70 Emb 754.1 10.2 made from cut 258.5 North balance less 5% = 706.7 borrowed 51.4 from channel in 214+25-15+80 1839 Class $\frac{1}{2}$ L.R. = 257.0 Cu. $\frac{1}{2}$ Ea = 257.0 192.7 borrowed in side class 10% L.R. = 193 Cu. 90% E = 173.4 Total Earth = 430.4 " L.O.R. = 276.3 Haul 450 yds	
0.0	67.36		0.2	31.5	
0.80	0.70		0.2	0.1	
1.20	0.0		754.1	1314+40% 1315+55 Exc 237 Cu. Ea	
1808			8.9		
			10.0	1315+15% 1318 Emb 1815.8 Cu. 15.8 made from cut South. 4.4 36.5 8.20 made from channel in left 16+15-19+90 Class channel $\frac{1}{2}$ L.R. = 410 $\frac{1}{2}$ Ea = 410 balance less 5% = 931 borrow in side class 10% L.R. = 931 Cu. 90% Ea = 837.9 Total Earth = 1247.9 Cu. " L.O.R. = 503.1 477.4 Haul in channel 500 yds " " Pit in L. 450 1119.2 Total Haul 950	
8.95	0.0				
0.0	74.02		23.7		
	197.97				
	210.91				

Station Grade

L C R

1317 433743

$\frac{-9.1}{20.7}$ -10.5 $\frac{-11.2}{23.8}$

+50

$\frac{-2.0}{10.0}$ -3.4 $\frac{-6.0}{16.0}$

1318

$\frac{0.0}{8.0}$ 0.0 $\frac{0.0}{8.0}$

+31

$\frac{+1.0}{8.3}$ +0.6 $\frac{+0.6}{8.2}$

+79

000

$\frac{+0.6}{8.2}$ +0.8 $\frac{+1.0}{8.3}$

1319+15

$\frac{+0.6}{8.2}$ 1.2 $\frac{+1.0}{8.3}$

+50

$\frac{+0.2}{8.1}$ 0.0 $\frac{0.0}{8.0}$

+55

$\frac{0.0}{8.0}$ 0.0 $\frac{-0.2}{7.3}$

+80 432903

1320+30

$\frac{-6.3}{16.5}$ -6.4 $\frac{-4.9}{14.4}$

+70

00

$\frac{-8.8}{20.2}$ -10.6 $\frac{-7.1}{17.7}$

Areas Cub Yds
Cut Fill Exc. Emb.

304.67

1119.7 Add 280.7 to fill
account extra width
of bank account of
grade change

349.0

72.20

669

0.0

0.0

1535.1

280.7

6.5

1815.8

11.35

Sta 1318 to 1319 + 55 Exc 272.5 ft
213.7 added for exc of fill made
before grade change.

21.6

1300

Haul into fill lost

19.5 250 yds hauled 200' = 500

1630

11.1

Sta 1319 + 50 to 1323 + 79

0.80

0.0

Emb'd 4481.2 yd

0.1

0.10

288.4 made from
Cut South

0.0

0.70

58.8

213.7

272.5

balance less 5%

= 3983.2 Cif

1928

hauled

class 15% LOR = 597.4

85% to = 3385.8

13808

292.3

256.52

777.8

1263.0

Station Grade

L O R

1321+40 432903

$\begin{array}{r} -9.0 \\ 20.5 \end{array}$ -10.2 $\begin{array}{r} -15.4 \\ 30.1 \end{array}$

00

1322

432903

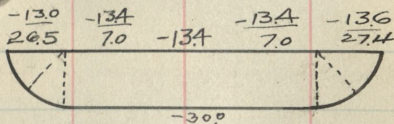
$\begin{array}{r} -8.2 \\ 19.3 \end{array}$ -9.9 $\begin{array}{r} -19.3 \\ 36.0 \end{array}$

1323

$\begin{array}{r} -11.9 \\ 24.9 \end{array}$ -12.3 $\begin{array}{r} -13.7 \\ 27.6 \end{array}$

+34 HB

+79 Toe Slope.



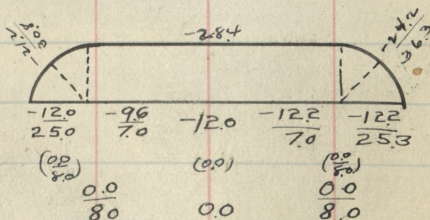
1324+38 Toe Slope.

1324+80

25+07

1325+15

1.00



+25

$\begin{array}{r} (+4.2) \\ 10.1 \end{array} + 2.7$ $\begin{array}{r} (+5.1) \\ 2.6 \end{array}$ $\begin{array}{r} +2.6 \\ 8.7 \end{array}$ $\begin{array}{r} (+5.0) \\ 10.5 \end{array}$

1326

$\begin{array}{r} (+13.0) \\ 14.5 \end{array} + 8.2$ $\begin{array}{r} (+13.0) \\ 7.5 \end{array}$ $\begin{array}{r} +7.5 \\ 9.9 \end{array}$ $\begin{array}{r} (+12.4) \\ 14.2 \end{array}$

+05 433368

$\begin{array}{r} (+15.3) \\ 15.6 \end{array} + 9.7$ $\begin{array}{r} +14.2 \\ 9.1 \end{array}$ $\begin{array}{r} +8.1 \\ 10.0 \end{array}$ $\begin{array}{r} (+13.1) \\ 14.6 \end{array}$

Areas Cub Yds
Cut Fill Exc. Emb.

55

343.46

1763.9

792.7

369.97

1449.0

412.47

546.1

454.93

430.4

4481.2

358.33

330.5 Sta 1324 + 38 to 25 + 15
Emb 562.7 made
from cut 20

0.0

0.0

562.7

462.9

8.6

Sta 1325 + 07 to 1331 Cut
partly
was taken out before
grade was changed
figures in brackets
show original cross section.

285.9

159.54

430.6

198.15

341.9

1067.0

Station Grade

L

C

R

$$1327 + 15 \quad 4334.18 \quad \begin{array}{l} (+10.4) \\ 14.2 \end{array} + 8.4 \quad \begin{array}{l} (+12.3) \\ 10.1 \end{array} + 8.0 \quad + 7.0 \quad \begin{array}{l} (+10.8) \\ 9.8 \end{array} \quad 13.4$$

$$+ 60 \quad \begin{array}{l} (+9.5) \\ 12.4 \end{array} + 4.2 \quad \begin{array}{l} (+8.1) \\ 9.1 \end{array} + 3.6 \quad + 3.5 \quad \begin{array}{l} (+6.3) \\ 8.9 \end{array} \quad 11.2$$

$$1328 + 10 \quad 4336.09 \quad \begin{array}{l} (+5.2) \\ 10.6 \end{array} + 1.3 \quad \begin{array}{l} (+4.0) \\ 8.3 \end{array} + 0.6 \quad + 0.8 \quad \begin{array}{l} (+3.0) \\ 8.2 \end{array} \quad 9.5$$

$$+ 45 \quad \begin{array}{l} (+7.8) \\ 11.9 \end{array} + 0.8 \quad \begin{array}{l} (+7.7) \\ 8.2 \end{array} + 0.7 \quad + 0.8 \quad \begin{array}{l} (+2.3) \\ 8.2 \end{array} \quad 11.7$$

$$+ 80 \quad \begin{array}{l} (+8.6) \\ 12.3 \end{array} + 0.4 \quad \begin{array}{l} (+8.1) \\ 8.1 \end{array} + 0.6 \quad + 1.0 \quad \begin{array}{l} (+7.4) \\ 8.3 \end{array} \quad 11.7$$

$$1329 + 06 \quad 4336.09 \quad \begin{array}{l} (+5.1) \\ 10.6 \end{array} + 0.8 \quad \begin{array}{l} (+4.4) \\ 8.2 \end{array} + 0.4 \quad \begin{array}{l} (+3.5) \\ 8.0 \end{array} \quad 9.8$$

$$1330 + 25 \quad \begin{array}{l} (+2.9) \\ 9.5 \end{array} + 0.8 \quad \begin{array}{l} (+1.8) \\ 8.0 \end{array} + 0.4 \quad + 0.0 \quad \begin{array}{l} (+1.1) \\ 8.6 \end{array}$$

$$+ 60 \quad \begin{array}{l} (+1.7) \\ 8.9 \end{array} + 0.0 \quad \begin{array}{l} (+1.0) \\ 8.0 \end{array} + 0.0 \quad - 1.8 \quad \begin{array}{l} (0.0) \\ 9.7 \end{array} \quad 8.2$$

$$1331 \quad 40.242 \quad \begin{array}{l} (0.0) \\ 8.0 \end{array} - 1.7 \quad - 2.6 \quad - 3.4 \quad \begin{array}{l} 9.6 \\ 12.1 \end{array}$$

$$1332 \quad - 3.1 \quad - 4.2 \quad - 5.2 \quad \begin{array}{l} 11.7 \\ 14.8 \end{array}$$

$$+ 50 \quad 4337.09 \quad - 3.8 \quad - 4.8 \quad - 6.0 \quad \begin{array}{l} 12.7 \\ 16.0 \end{array}$$

Areas. Cub. Yds.
Cut Fill Exc. Emb

(108)
134)

171.20

1.0670

Sta 1325+15 to 1330+60

(63)
112)

66.80

198.3

Exc 26540 Cub. yds.

1325+15 to 28+10

Class S.R. = 2082.3 Cu. y.

28+10 to 30+60 = 569.7

74.7

Class 20% S.R. = 113.9 "

80% L.R. = 455.8 "

(430)
95)

13.92

Total Lo Rock = 455.8

(23)
117)

124.9

17.1

" Solid " = 2196.2

Haul 249 yds to fill

" 200 from 25+90 to 24+70 = 250

(4)
77)

10.52

14.9

" 990 " 28 to 33 = 4950

" 28 ft from

Total haul = 5200

45.5

644 0.0

28

6.2

00

14.27

1420.3

1146.4

Taken out before Grade-Change

1/2 55.8545

to 28

2566.7

84.3

44.7

4606

2652.0

242.2

84.70

174.0

103.18

185.3

652.4

Station	Grade	L	C	R
1333	4337.24	$\frac{-37}{12.6}$	-4.6	$\frac{-56}{15.4}$

1334		$\frac{-30}{11.5}$	-4.4	$\frac{-57}{15.6}$
------	--	--------------------	------	--------------------

+50	+0.292	$\frac{-24}{10.6}$	-2.8	$\frac{-3.3}{12.0}$
-----	--------	--------------------	------	---------------------

1335+20		$\frac{0.0}{8.0}$	-0.8	$\frac{-1.6}{9.4}$
---------	--	-------------------	------	--------------------

1336		$\frac{+1.3}{8.3}$	+0.6	$\frac{0.0}{4.0} \quad \frac{-0.7}{8.1}$
------	--	--------------------	------	--

+60		$\frac{+0.8}{8.2}$	+0.2	$\frac{0.0}{2.0} \quad \frac{-0.6}{7.9}$
-----	--	--------------------	------	--

1337+15		$\frac{-0.3}{7.5}$	-1.1	$\frac{-2.1}{10.2}$
---------	--	--------------------	------	---------------------

1338		$\frac{-2.4}{10.6}$	-3.6	$\frac{-5.0}{14.5}$
------	--	---------------------	------	---------------------

+84	+0.42			
-----	-------	--	--	--

+85		$\frac{-2.8}{11.2}$	-4.0	$\frac{-5.4}{15.1}$
-----	--	---------------------	------	---------------------

1339+50	4339.22	$\frac{-3.8}{12.7}$	-4.9	$\frac{-6.2}{16.3}$
---------	---------	---------------------	------	---------------------

Areas Cub Yds.
Cut Fill Exc. Emb.

57

96.95

65.24

1330 + 25 to 36 + 60

346.3

Emb 1236.1

90.07

1221.6 from cut do.

145 " " N.

131.2

51.59

832

0.0

12.56

1335 + 20 to 1337 + 15

8.8

20.2

Exp 26.3 Cur. Exp.

8.89

1.05

14.6

2.8

4.22

1.50

1236.1

2.9

20.0

1336 + 60 to 1343 + 10

Emb 1957.7 Cy.

0.0

18.14

26.3

14.4 made from cut do.

5438 " " " N.

140.4 balance less 5%
= 1329.5 borrowed.

71.08

Class 5% L.O.R. = 66.5 Cy.

239.9

95% E.O. = 1263.0

81.30

225.4

106.05

193.8

819.5

SECTION 26

Station	Grade	L	C	R
1340	4339.43	$\frac{-3.9}{12.9}$	-4.6	$\frac{-6.3}{16.5}$

1341		$\frac{-4.4}{13.6}$	-5.4	$\frac{-6.9}{17.4}$
------	--	---------------------	------	---------------------

1341+65 BC. 2x4x30

1342		$\frac{-4.2}{13.3}$	-6.4	$\frac{-6.7}{17.1}$
------	--	---------------------	------	---------------------

14' R.B. on Left.

+90		$\frac{0.0}{14.0}$	-1.3	$\frac{-2.2}{10.3}$
-----	--	--------------------	------	---------------------

1343+10	+0.42	$\frac{+2.0}{9.0}$	+0.5	$\frac{0.0}{8.0}$
---------	-------	--------------------	------	-------------------

+50		$\frac{+3.8}{15.9}$	+2.3	$\frac{+1.0}{8.5}$
-----	--	---------------------	------	--------------------

1344		$\frac{+5.5}{16.8}$	+3.9	$\frac{+2.8}{9.4}$
------	--	---------------------	------	--------------------

1345		$\frac{+6.0}{17.0}$	+4.5	$\frac{+4.0}{10.0}$
------	--	---------------------	------	---------------------

+50		$\frac{+5.0}{16.5}$	+3.8	$\frac{+3.4}{9.7}$
-----	--	---------------------	------	--------------------

1346	434203	$\frac{+2.5}{15.3}$	+1.5	$\frac{+0.9}{8.5}$
------	--------	---------------------	------	--------------------

+1.30

Areas Cub. Yds.
Cut Fill Exc. Emb

819.5

10332

419.6

12325

4790 1200' Lumber

13543

2378

0.0

728

2.3

1.8

938

0.0

1957.8

35.5 Sta 1342+90 to 1347+50

38.53

Exc 717.5 Cubyds.

100.5 Class 40% L.R. = 287% Cuy.
60% Ea = 4305 "

70.01

286.7 Haul 58.750 fm

84.80

" 58.8 N "

" 300 fm 44+40 to 42 = 720

" 300 " 45+20 to 48+50 = 990

142.9

Total haul 1710

69.60

87.7

25.20

544
710.0

SECTION 26

Station	Grade	L	C	R
1346+85	4343.13	+1.8 14.9	+0.6	0.0 8.0

1347+50

Ditches

Sta	Size	Cu. Yds.		
		Est.	L.R.	S.R.
1297+25 to 1297+85	Side ditches R & L		44	
1299+80 to 1306	Surf. D on L 12x3x620	414	41.3	
1300+60 to 1304+30	Side Ditches R & L		330	21.7
1307 " 1310+75	" " " "		333	22.2
1307+30 " 1311+30	Surf. " 15x3x400	334	33.3	
1312 " 1314	" " 2x4x200	296	29.7	
1338+30 " South	" " 12x4x560	498	49.8	
1328 " 1330+40	Side " R & L		284	7.1
1343+10 " 1346+90	" " R		28.1	
1341+80 to 1342+80	Tail " L 1x3.5x100	130		
1342+80 to 1347+50	Side " L see opposite page		2036	67.8
1347+50 to 1348+15	Tail 1.5x4.0x65		14.4	
		167.2	499.3	118.8

Areas Cub Yds.
Cut Fill Exc. Emb

938 00

7.5

717.5

0.0

Ditch 1342+80 to 1347+50

					Areas	Cub. Yds.
1342+80	0.0	+1.7	+1.7	E		
= 0	8.0	9.0	2.0	0.0	11.05	16.8
+40	0.0	+1.6	+1.6	0.0	11.60	21.2
	8.5	8.0	2.0	0.0		
+80	0.0	+2.2	+2.2	0.0	17.05	23.8
	9.5	9.0	3.0	0.0		
1+25	0.0	+1.4	+1.4	0.0	11.55	24.8
	9.5	9.0	2.0	0.0		
+70	0.0	+2.8	+2.8	0.0	18.20	58.4
	9.0	7.0	3.0	0.0		
2+55	0.0	+2.4	+2.4	0.0	19.20	57.2
	10.0	9.0	3.0	0.0		
3+35	0.0	+2.5	+2.5	0.0	19.38	48.1
	10.0	8.5	3.0	0.0		
4+20	0.0	+1.6	+1.6	0.0	11.20	20.6
	9.0	8.0	3.0	0.0		

20.6

7.1

= 1347+50 0.0 +6.2 +2.2 0.0 11.00 271.4 per opp. Page

Haul 1/2 each way into fill
271.4 hauled 280' = 470 yds hauled 100'

Borrow for False Beam

67.8

1313+40 to 1315

0 = 1x6
+50 = 3x6
+40 = 3x6
+60 = 00

89.0 { Car 59.4 Cu.
Lo. R 29.6 "

118.8

1336 Borrow for Road xing 2x14x20 = 20.7 Cu. ^{earth}

Section 26

Clearing

1338 to 1347	70' wide	Very light (about 1/3)	21 000
1325 1/2	1331-60	"	36 000
1323	165'	"	
1320+90	200	"	38 250
1320+90	145	"	
1318	90	"	34 075
1316	150	"	24 000
1313+50	80	"	28 750
1310+50	75	"	23 250
1306	125	"	45 000
1300+50	90	"	48 375
1297	90	"	31 500

758 Acres = 330 200

000
000
50
75
00
050
50
00
00
075
00
00

SECTION 26

Page	Acres Clearing	Excavation ~ Cub. Yards.				Total in Banks. Cu. Yds.
		Total in Cut	Earth	Loose Rock	Solid Rock	
48		11.7 ✓		11.7 ✓		
48						1240.7 ✓
49		702.8 ✓		421.7 ✓	281.1 ✓	
50						1584.6 ✓
51		1050.7 ✓		630.4 ✓	420.3 ✓	
51						329.6 ✓
52		1.6 ✓		1.6 ✓		
52		61.7 ✓	30.8 ✓	30.9 ✓		
53						754.1 ✓
53		23.7 ✓	23.7 ✓			1815.8 ✓
54		272.5 ✓	272.5 ✓			
54						4481.2 ✓
55						562.7 ✓
56		2652.0 ✓		455.8 ✓	2196.2 ✓	
57		26.3 ✓	26.3 ✓			1236.1 ✓
57						1957.7 ✓
58		717.5 ✓	430.5 ✓	287.0 ✓		
59		785.3 ✓	167.2 ✓	499.3 ✓	118.8 ✓	
59						89.0 ✓
59						20.7 ✓
60	7.58 ✓					
	7.58	6305.8	951.0	2338.4	3016.4	14072.2

SUMMARY

	Cub.Yds. Bank made from Cuts	Cub.Yds. Shrinkage deducted	Borrow Earth	Cu.Yds. Loose Rock	Cub.Yds. Hauled 100'	Ft.B.M. Lumber in Culverts
						1004 ✓
7 ✓	460.6 ✓	39.0 ✓	564.1 ✓	177.0 ✓		588 ✓
					1300 ✓	
46 ✓	1584.6 ✓					726 ✓
					2755 ✓	
7.6 ✓	1372 ✓	9.6 ✓	91.4 ✓	91.4 ✓		
4.1 ✓	10.2 ✓	37.2 ✓	430.4 ✓	276.3 ✓	450 ✓	
5.8 ✓	15.8 ✓	49.0 ✓	1247.9 ✓	503.1 ✓	950 ✓	
					500 ✓	
1.2 ✓	288.4 ✓	209.6 ✓	3385.8 ✓	597.4 ✓		
2.7 ✓	562.7 ✓					
					5200 ✓	
6.1 ✓	1236.1 ✓					
7.7 ✓	5582 ✓	70.0 ✓	1263.0 ✓	66.5 ✓		
					1710 ✓	1200 ✓
					770 ✓	
9.0 ✓			59.4 ✓	29.6 ✓		
0.7 ✓			20.7 ✓			
2.2 ✓	4853.8 ✓	414.4 ✓	7062.7 ✓	1741.3 ✓	1363.5 ✓	3578 ✓

SECTION 26 - COST.

CLEARING	7.58 ACRES @ $\$35^{00}$	=	265.30
EXCAVATION, EARTH	951.0 CU. YDS @ 0.14	=	133.14
" L. ROCK	2338.4 " " " 0.32	=	748.29
" S. ROCK	3016.4 " " " 0.85	=	2563.94
BORROW, EARTH	7062.7 " " " 0.12	=	847.52
" L. ROCK	1741.3 " " " 0.30	=	522.39
HAUL, 100 FT.	13635 " " " $0.01\frac{1}{2}$	=	204.52
LUMBER	3518 FT. B.M. " $\$12^{00}$	=	42.22
TOTAL =			$\$5327.32$

65.30

33.14

48.29

563.94

47.52

22.39

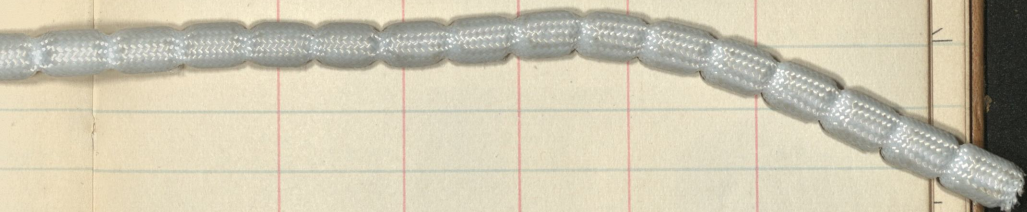
04.52

42.22

27.32



63



SECTION 27

Station	Grade	L	C	R
1346 + 35	434313	$\begin{array}{r} +1.8 \\ 14.9 \end{array}$	+0.6	$\begin{array}{r} 0.0 \\ 8.0 \end{array}$
1347 + 50		$\begin{array}{r} 0.0 \\ 14.0 \end{array}$	-1.0	$\begin{array}{r} -2.0 \\ 10.0 \end{array}$
1348	53+35	$\begin{array}{r} -2.8 \\ 11.2 \end{array}$	-3.8	$\begin{array}{r} -5.0 \\ 14.5 \end{array}$
	+ 50	$\begin{array}{r} -4.4 \\ 13.6 \end{array}$	-5.1	$\begin{array}{r} -6.5 \\ 16.8 \end{array}$
1349	+130	$\begin{array}{r} -4.8 \\ 14.2 \end{array}$	-5.8	$\begin{array}{r} -7.4 \\ 18.1 \end{array}$
1350		$\begin{array}{r} -4.5 \\ 14.2 \end{array}$	-5.2	$\begin{array}{r} -6.1 \\ 16.2 \end{array}$
1351		$\begin{array}{r} -5.4 \\ 15.1 \end{array}$	-6.4	$\begin{array}{r} -7.4 \\ 18.1 \end{array}$
1352		$\begin{array}{r} -3.7 \\ 12.6 \end{array}$	-4.3	$\begin{array}{r} -5.1 \\ 14.7 \end{array}$
1353	435112	$\begin{array}{r} -1.4 \\ 9.1 \end{array}$	-1.9	$\begin{array}{r} -2.4 \\ 10.6 \end{array}$

Areas	Cub. Yds.
Cut Fill	Exc. Emb.

64

938 0.0

7.5 9.7

0.0 12.11

81.7

7613

177.6

115.67

233.4

136.37

465.7

11510

492.8

15104

445.4

89.50

225.0

3202

77.9

2209.2

Station	Grade	L	C	R
1354	4352.47	$\frac{0.0}{8.0}$	-0.7	$\frac{-1.2}{8.8}$
	+1.30			
1355		$\frac{0.0}{8.0}$	-0.2	$\frac{-0.7}{8.1}$
1356	4355.03	$\frac{-0.8}{8.2}$	-1.4	$\frac{-2.1}{10.2}$
+60		$\frac{-1.5}{9.3}$	-2.2	$\frac{-3.4}{12.1}$
+85		$\frac{-4.5}{13.8}$	-6.6	$\frac{-10.0}{22.0}$
1357		$\frac{-7.3}{18.0}$	-5.8	$\frac{-5.3}{15.0}$
	+2.50			
		1356+84 B.C. 1 X 3 X 3V		
+20		$\frac{-2.8}{11.2}$	-2.9	$\frac{-3.2}{11.8}$
1358+20		$\frac{0.0}{13.0}$ $\frac{0.0}{8.0}$	-0.5	$\frac{-0.9}{8.4}$
+60		$\frac{+1.6}{13.8}$ $\frac{+1.2}{8.6}$	+0.4	$\frac{0.0}{8.0}$
1359	4362.53	$\frac{+2.2}{14.1}$ $\frac{+1.9}{9.0}$	+1.3	$\frac{+0.6}{8.3}$

Areas Cub. Yds.
Cut Fill Exc. Emb.

	10.08		2209.2	1346+85 to 1358+60
		262	Emb'd	2728.7
	4.06		5439	Made from Cut & Ditch South
		502	1564	Made from Cut & ditch North
	2303			Balance less 5% = 1927.0 Borrowed
		70.8		Class 10% L.O.R. = 192.7
	4069			90% Ea = 1734.3
		97.0		
	168.89			
		857		
	139.80			
		71.9		904' Lumber
	5435			
		114.1		
0.0	725			
		7.5	36	
15.12	0.0		2728.7	
		34.5		1358+20 to 1360+25
				Exc 124.4 Cut. Earth
31.44				Have 1/2 back bay free
		51.6		
		93.6		

Station Grade

L

C

R

1359+50 4363.78

$\begin{array}{r} +2.0 \\ 14.0 \\ \hline +1.6 \\ 8.8 \end{array}$

+0.8

$\begin{array}{r} +0.5 \\ 8.3 \\ \hline \end{array}$

+60

$\begin{array}{r} +2.8 \\ 14.4 \\ \hline +2.1 \\ 9.1 \end{array}$

+0.7

$\begin{array}{r} 0.0 \\ 8.0 \\ \hline \end{array}$

1360+25

$\begin{array}{r} 0.0 \\ 13.0 \\ \hline 0.0 \\ 8.0 \end{array}$

-0.7

$\begin{array}{r} -1.3 \\ 9.0 \\ \hline \end{array}$

+90

$\begin{array}{r} -1.3 \\ 9.0 \\ \hline \end{array}$

-2.2

$\begin{array}{r} -3.6 \\ 12.4 \\ \hline \end{array}$

1361+35

+2.50

$\begin{array}{r} -0.5 \\ 16.8 \\ \hline \end{array}$

-8.6

$\begin{array}{r} -12.0 \\ 25.0 \\ \hline \end{array}$

+65

$\begin{array}{r} -9.1 \\ 20.7 \\ \hline \end{array}$

-9.4

$\begin{array}{r} -10.2 \\ 22.3 \\ \hline \end{array}$

1362+15

$\begin{array}{r} 0.0 \\ 8.0 \\ \hline \end{array}$

0.0

$\begin{array}{r} 0.0 \\ 8.0 \\ \hline \end{array}$

1363

$\begin{array}{r} +3.0 \\ 9.5 \\ \hline \end{array}$

+2.5

$\begin{array}{r} +2.1 \\ 9.1 \\ \hline \end{array}$

+60

$\begin{array}{r} +1.0 \\ 8.5 \\ \hline \end{array}$

+0.4

$\begin{array}{r} 0.0 \\ 8.0 \\ \hline \end{array}$

+75 4374.41

$\begin{array}{r} 0.0 \\ 8.0 \\ \hline \end{array}$

-0.4

$\begin{array}{r} -1.2 \\ 8.8 \\ \hline \end{array}$

Areas Cub. Yds.
Cut Fill Exc. Emb

24.25 00

93.6

9.4

26.57 0.0

21.4

1359+60 to 1362+15
8.4 Embk 842.9 cu.

0.0 10.50

124.4

122.4 made from
Cut & Ditch to.

69.6 from Cut north

61.6 balance less 5%

borrowed 617.4

40.69

class 25% to R. = 154.4 cu.

75% Earth = 463.0 "

237.6

244.49

285.6

269.65

249.7

0.0 0.0

842.9

68.7

Sta 1362+15 to 1363+75 Ex. 126.6

class $\frac{1}{2}$ Ea = 63.3 cu.

43.65

$\frac{1}{2}$ L.R. = 63.3 "

56.6

Have $\frac{1}{2}$ each way from

7.30 0.0

1.3

1.4

126.6

0.0 7.56

34.4

35.8

Station Grade

L

C

R

1364. 0 437503

$\frac{-2.6}{10.9}$

-3.4

$\frac{-4.5}{13.8}$

+35

$\frac{-15.4}{30.1}$

-16.4

$\frac{-17.7}{33.6}$

1364+30 B.C. 1x3x6a

+80

$\frac{-18.3}{34.5}$

-28.0

$\frac{-30.5}{52.8}$

1365+30

$\frac{-26.6}{46.9}$

-23.8

$\frac{-21.4}{17.0}$

$\frac{-23.4}{42.1}$

1366

+300

$\frac{-12.5}{25.8}$

-10.6

$\frac{-11.0}{23.5}$

+50

$\frac{-6.2}{16.3}$

-6.7

$\frac{-7.7}{18.6}$

1367

$\frac{-3.9}{12.9}$

-4.5

$\frac{-5.4}{15.1}$

1368+25

$\frac{0.0}{8.0}$

-1.1

$\frac{-1.4}{9.1}$

+37 0 4388.15

+55

$\frac{+0.8}{8.2}$

+0.3

$\frac{0.0}{8.0}$

1369

+24.8

4389.74

$\frac{+3.7}{8.9}$

+2.5

$\frac{+1.4}{8.4}$

Areas. Cub Yds.
Cut Fill Exc. Emb.

67

358

6684

1568 FT LUMBER

4569

1363 + 60% 1368 + 55

63819

1692.7 Emb'd 7531.0 Cu.

69.6 made from
Cut So.

1393.00

1400 from Cut Note

23889 Balance less 5%

1186.98

= 5758.4 borrowed

1983.9 class 25% to R = 1439.6
75% left = 4318.8

34354

4714 Haul 2000.

16557

241.8

9555

2543

0.0

14.31

21

5.3

563

0.0

7531.0

39.7

4202

125.3

167.1

Station	Grade	L	C	R
1369 + 50	4390.98	$\frac{+66}{9.7}$	+5.4	$\frac{+4.1}{9.0}$

1370		$\frac{+9.6}{10.4}$	+7.7	$\frac{+6.1}{9.5}$
------	--	---------------------	------	--------------------

+ 50		$\frac{+10.7}{10.7}$	+9.1	$\frac{+7.0}{9.8}$
------	--	----------------------	------	--------------------

1371		$\frac{+9.1}{10.4}$	+6.9	$\frac{+4.9}{9.2}$
------	--	---------------------	------	--------------------

+ 50	+ 24.8	$\frac{+6.0}{9.5}$	+4.0	$\frac{+2.0}{8.5}$
------	--------	--------------------	------	--------------------

+ 70		$\frac{+4.0}{9.0}$	+2.2	$\frac{0.0}{8.0}$
------	--	--------------------	------	-------------------

1372 + 30		$\frac{0.0}{8.0}$	-1.1	$\frac{-5.1}{15.1}$
-----------	--	-------------------	------	---------------------

+ 60		$\frac{-2.0}{10.0}$	-3.1	$\frac{-4.5}{13.8}$
------	--	---------------------	------	---------------------

1373		$\frac{-3.2}{11.8}$	-4.3	$\frac{-6.0}{16.0}$
------	--	---------------------	------	---------------------

+ 50	4400.90	$\frac{-2.0}{10.0}$	-3.6	$\frac{-6.4}{16.6}$
------	---------	---------------------	------	---------------------

Areas. Cub. Yds.
Cut Fill Exc. Emb

68

93.29

167.1

1368 + 25 to 1372 + 30

2155 Exc 1386.6 Solid Rock

139.42

Haul 533 N. fr

" 50 S. "

281.0

" 1070 from 1370 + 35 to 66 + 25
= 4390.

164.07

Estimate 25%

267.5 Backfilling from mat left
in Cut.

124.82

178.5

68.00

380

34.70

0.0

25.7 23.4 1371 + 70 to 75 + 90

00

31.61

117.33

213.3 Subg.

Embnt 1359.2

66.6 from Cut So.

1386.6

5071292.6 " " North

59.64

112.3

91.97

156.7

77.28

205.3

548.4

SECTION 27

Station	Grade	L	C	R
1374	4402.14	$\frac{-4.0}{13.0}$	-62	$\frac{-8.4}{19.6}$
		1374+32 BC 1x24+22		
+30		$\frac{-6.6}{16.9}$	-8.1	$\frac{-7.7}{17.6}$
+75		$\frac{-7.2}{17.8}$	-7.0	$\frac{-6.4}{16.6}$
1375+35	4402.48	$\frac{-5.4}{15.1}$	-3.5	$\frac{-2.0}{10.0}$
+70		$\frac{-2.4}{10.6}$	-1.2	$\frac{0.0}{8.0}$
+90		$\frac{0.0}{8.0}$	+1.1	$\frac{+2.8}{8.7}$
1376+45	4408.19	$\frac{+2.1}{8.5}$	+3.0	$\frac{+3.8}{9.0}$
1377		$\frac{+4.9}{9.2}$	+5.5	$\frac{+6.1}{9.5}$
+50	4408.50	$\frac{+7.4}{9.9}$	+7.5	$\frac{+7.6}{9.9}$
1378	4412.06	$\frac{+8.8}{10.2}$	+8.2	$\frac{+7.3}{9.8}$

Areas Cub. Yds.
Cot Fill Exc. Emb.
548.4

144.46

185.7 498 Feet Lumber

189.77

298.1

168.00

264.2

69.82

58.0

0.0

19.56

5.0

4.8

2039

0.0

1359.2

71.5 Sta 1375 + 70 to 1380

4985

Exc. 1415.8 Cu Yds.

1375 + 70 to 77 + 50 = 539.2 Solid Rock
includes 102 yds sub grade

95.43

77 + 50 to 80 = 876.6

class 40% L.R. = 350.6 Cu

212.7

60% S.R. = 526.0 "

134.25

Total L.R. Rock = 350.6 Cu

" Solid = 1065.2 "

259.9 Haul 64 yds So. for

146.40

" 1060 from 77 + 80 to 74 + 20 = 3820.

" 698 + 79 + 20 to 82 = 200

129.0

Total Haul 4020

826.1

Station	Grade	L	C	R
1378+25	4412.68	$\frac{+88}{102}$	+7.3	$\frac{+62}{96}$

+50		$\frac{+81}{10.0}$	+6.3	$\frac{+45}{9.1}$
-----	--	--------------------	------	-------------------

1379		$\frac{+6.1}{9.5}$	+4.2	$\frac{+2.1}{8.5}$
------	--	--------------------	------	--------------------

+25		$\frac{+4.6}{9.2}$	+2.2	$\frac{0.0}{8.0}$
-----	--	--------------------	------	-------------------

+2.50

+70		$\frac{+22}{8.6}$	$\frac{0.0}{2.0}$	$\frac{-2.5}{-0.5}$
-----	--	-------------------	-------------------	---------------------

1380		$\frac{+24}{8.6}$	0.0	$\frac{-3.8}{12.7}$
------	--	-------------------	-----	---------------------

+50		$\frac{+33}{8.8}$	+1.2	$\frac{0.0}{4.5}$
-----	--	-------------------	------	-------------------

1381	4419.56	$\frac{+24}{8.6}$	0.0	$\frac{-1.8}{9.7}$
------	---------	-------------------	-----	--------------------

+60		$\frac{+11}{8.3}$	$\frac{0.0}{4.0}$	$\frac{-3.6}{-1.1}$
-----	--	-------------------	-------------------	---------------------

+0.14

1382	4419.70	$\frac{0.0}{8.0}$	-1.7	$\frac{4.8}{14.2}$
------	---------	-------------------	------	--------------------

Areas.	Cub. Yds.	70
Cut	Fill	Exc. Emb.
132.27		826.1
		Back fill from max'l
		112.4 left in cut
110.57		surle 15%.
		167.8
70.60		
		50.0
37.32	00	
		28.5 6.6
6.60	11.95	
		9.0 14.0
9.60	13.30	1193.8
		222.0 ss.
		1415.8
		28.5 14.1
21.18	1.88	
		28.5 7.6
9.60	6.30	
		13.1 31.0
2.20	21.62	
		1.1 42.4
0.0	35.67	
		1.7 52.1
		72.9 167.8

Station Grade

L C R

1382+50 4419.77 $\begin{array}{r} +12 \\ 8.3 \end{array} \begin{array}{r} 0.0 \\ 3.5 \end{array} -0.7 \quad \begin{array}{r} -4.2 \\ 13.3 \end{array}$

1383

$\begin{array}{r} +2.0 \\ 8.5 \end{array} \quad 0.0 \quad \begin{array}{r} -2.6 \\ 10.9 \end{array}$

1384

$\begin{array}{r} +1.4 \\ 8.4 \end{array} \quad 0.0 \quad \begin{array}{r} -1.7 \\ 10.6 \end{array}$

+55

$\begin{array}{r} +12 \\ 8.3 \end{array} \begin{array}{r} 0.0 \\ 3.5 \end{array} -0.8 \quad \begin{array}{r} -2.0 \\ 10.0 \end{array}$

+80

$\begin{array}{r} +0.6 \\ 8.2 \end{array} \begin{array}{r} 0.0 \\ 3.5 \end{array} -0.6 \quad \begin{array}{r} -2.4 \\ 10.6 \end{array}$

1385

$\begin{array}{r} 0.0 \\ 8.0 \end{array} \quad -1.1 \quad \begin{array}{r} -3.0 \\ 11.5 \end{array}$

+60

$\begin{array}{r} -9.8 \\ 21.7 \end{array} \quad -10.2 \quad \begin{array}{r} -10.4 \\ 22.6 \end{array}$

+63 4420.20

1385+57 Box Culvert 2x3 1/2 x 4 1/2

1386

$\begin{array}{r} -9.8 \\ 21.7 \end{array} \quad -10.3 \quad \begin{array}{r} -11.2 \\ 23.8 \end{array}$

+50

$\begin{array}{r} -9.7 \\ 21.6 \end{array} \quad -10.4 \quad \begin{array}{r} -11.2 \\ 23.8 \end{array}$

1387+25 4421.71

$\begin{array}{r} 0.0 \\ 8.0 \end{array} \quad -1.2 \quad \begin{array}{r} -2.2 \\ 10.3 \end{array}$

Areas Cub. Yds.
Cut Fill Exc. Emb

2.70 20.58 72.9 167.8 1380 1/6 1385
Exc 118.7 Cy. lo. Rock
9.9 27.5

8.00 9.10

25.2 27.9

5.60 5.95

8.5 18.7

2.70 12.40

1379 + 25 1/6 1388 + 55

1.9 11.6 Embkt. 2118.3 Cy.
80.3 made from cut
at 1379

1.35 12.63

130.6 from cut do.

0.3 12.5 13.0 " " N.

0.0 21.22

118.7

Balance less 5%

= 1799.7 Cubyds

353.2 Earth borrow

296.63

447.7 1588 Ft Lumber.

307.83

571.4

309.23

455.4

0.0 18.68

1.1 10.4

1.1 210.4

Station Grade

L C R

1387+50 442194 $\frac{+0.9}{8.5}$ 0.0 $\frac{-1.1}{8.7}$

1388 $\frac{+1.0}{8.5}$ 0.0 $\frac{-1.4}{9.1}$

+25 $\frac{+1.0}{8.5}$ 0.0 $\frac{-1.3}{9.0}$

+55 $\frac{+1.8}{8.9}$ +0.8 $\frac{0.0}{9.0}$

+75 $\frac{+2.8}{9.4}$ +1.1 $\frac{+0.4}{9.2}$

+95 $\frac{+1.6}{8.8}$ +0.6 $\frac{0.0}{8.0}$

1389+15 $\frac{0.0}{8.0}$ -0.5 $\frac{-1.7}{9.6}$

+55 $\frac{-3.6}{12.4}$ -4.2 $\frac{-6.0}{16.0}$

+90 $\frac{0.0}{8.0}$ -1.8 $\frac{-2.6}{10.9}$

1390 442429 $\frac{+0.5}{8.3}$ $\frac{0.0}{5.0}$ -0.7 $\frac{-2.1}{10.2}$

Areas Cob. Yds.
Cut Fill Exc. Emb.

360 385

1.1 2104.1

7.0 8.1

400 490

3.7 4.4

400 455

9.9 1.7

1396 0.0

2118.3

13.7

2303

12.8

1144 0.0

2.8 2.6

51.0

0.0 10.35

76.7 1388+95% 1390+85

9324

Emb 177.2 C.M.

33.3 made from
cut north

77.4 43.1 from Cut &

0.0 26.11

Balance less 5%

= 95.8 Cub. Borrow

0.1 7.2

Earth

0.75 12.67

27.2 13.3

27.3 177.2

Station	Grade	L	C	R
1390+85	442509	$\frac{+27}{91}$	+0.9	$\frac{0.0}{80}$

1391		$\frac{+35}{98}$	+2.3	$\frac{+1.1}{86}$
------	--	------------------	------	-------------------

+45		$\frac{+47}{104}$	+32	$\frac{+1.9}{90}$
-----	--	-------------------	-----	-------------------

1392		$\frac{+2.9}{95}$	+14	$\frac{+0.5}{83}$
------	--	-------------------	-----	-------------------

+35		$\frac{+0.8}{84}$	+0.1	$\frac{0.0}{80}$
-----	--	-------------------	------	------------------

+70		$\frac{0.9}{80}$	-0.3	$\frac{-1.1}{87}$
-----	--	------------------	------	-------------------

+95		$\frac{-2.9}{114}$	-4.7	$\frac{-5.0}{145}$
-----	--	--------------------	------	--------------------

1392+95 B.C. 2x4'2" x 25'

1393+10		$\frac{-1.0}{85}$	-15	$\frac{-1.9}{99}$
---------	--	-------------------	-----	-------------------

1394		$\frac{0.0}{80}$	-0.6	$\frac{-1.4}{91}$
------	--	------------------	------	-------------------

+50	442852	$\frac{-1.0}{85}$	-16	$\frac{-2.6}{10.9}$
-----	--------	-------------------	-----	---------------------

Areas Cub Yds. 73
 Cot Fill Exc. Emb.

16.50 0.0

1389 190 to 1392 + 70

156

Exc 229.9 Cub yds.

39.56

class 1/2 North = 114.9 Cu.

1/2 LOR = 115.0 "

80.8

Have 30.3 do for

57.44

" 24.6 do "

" 170 from 91 + 40 to 93 + 90

= 430 haul

85.0

2606

19.5

40.2 0.0

1.7 2.7

0.0 636 229.9

43.9 1030 Feet Lumber.

88.52

1392 + 35 to 1396

31.2

Embark 245.8 Cu.

2395

46.2 made from
 cut North

56.6

219.6 from cut do.

1003

35.3

2814

46.5

216.2

SECTION 27

Station Grade.

L

C

R

1395

442901

$\frac{-0.7}{8.1}$

-14

$\frac{-2.0}{10.0}$

+25

$\frac{0.0}{8.0}$

-0.6

$\frac{-0.8}{8.2}$

+55

+0.94

$\frac{0.0}{8.0}$

-0.8

$\frac{-1.2}{8.8}$

+60

$\frac{0.0}{8.0}$

-0.4

$\frac{-1.2}{8.8}$

1396

442995

$\frac{+2.0}{9.0}$

+10

$\frac{0.0}{8.0}$

1397

$\frac{+1.6}{8.8}$

0.0

6.5 0.0

1397+77²

0.0

0.0

0.0

Areas. Cub. Yds.
Cut Fill Exc. Emb

2162

22.12

13.8

7.66

10.3

10.92

1.7

0.0

7.56

8.1

3.8

16.50

0.0

245.8

Sum 1395 + 60% 1399 + 77

32.8

Exc 420 earth

12.0

1.1

0.0

42.0

Section 27

Ditches

Stations		Cub. Earth	Yds. Loose Rock
1357+60 to 1361+40	Ditch in cut on L 1.7 x 7 x 380. = 1675	83.7	838.
	Have 37 Yds into false berm at 62 80 Yds into fill south 50 " " " North		
1362+15 to 1363+70	Side Ditch R & L		230
1380 to 85	" " "		37.0
1387+15 to 1389+15	" " "		14.8
1386 " 1387+15	Slope " mL 1 x 3 x 105		11.7
1389+90. 1392+70	Side " "		20.7
1395+92	Surf Ditch South { 12 x 3 x 330 } { 1 x 3 x 170 } 629	31.5	31.4
1395+92	" " North 1.5 x 5 x 330	91.7	
		206.9	222.4

Clearing

ds. Loose Rock	1347 to 1362 ~ 100' Wide very light (about $\frac{1}{3}$) =	50000
838.	1362 + 1368 ~ 210 " " (" $\frac{1}{3}$)	42000
	1368 + 1380 - 70 "	84000
230	Spur 25 " x 700	17500
37.0	1380 + 1395 60 " (about $\frac{1}{3}$)	30000
148	1379 Tunnel Pit m R 60 x 150	9000
11.7	1380 " " + L 50 x 150	7500
20.7	55' Area =	240000

Alignment Treadwell Spur.

1380+50 Main Line = 0 P.T. = HEAD BLOCK
 0 P.T.
 1+23^E P.C. 16° L Ang. 55° 45' 15° 09' F.R.O.O.
 4+71^E P.T.
 5+88^E P.C. 5° R A. 3° 32'
 6+59 P.T.
 8+15 End

B.M.R.R. MAIN LINE
 To May Pt

55° 09'

7+99 End of Track

Smelter

Section 27

Treadwell Spur

1380+50 Main Line = 0 Spur

S/a Grade L C R

0		<u>0.0</u> 7.0		
1		<u>-1.6</u> 9.0	<u>0.0</u> 1.0	
	+200 441 6.3	<u>-2.9</u> 10.7	<u>2.3</u> 2.3	<u>-0.6</u> 7.8
+50		<u>-8.3</u> 17.4	<u>-6.0</u> 6.0	<u>-2.2</u> 9.7
+80		<u>-9.6</u> 19.0	<u>-6.0</u> 6.0	<u>-3.4</u> 11.2
2		<u>-14.1</u> 74.7	<u>-9.0</u> 9.0	<u>-6.8</u> 15.5
+50		<u>-12.7</u> 22.9	<u>-6.0</u> 8.3	<u>-6.0</u> 14.5
3		<u>-7.2</u> 16.0	<u>-3.8</u> 3.8	<u>-2.3</u> 9.8
+50		<u>-5.9</u> 14.5	<u>-2.8</u> 2.8	<u>0.0</u> 8.0
+65	0.4	<u>-1.8</u> 9.2	<u>0.0</u> 0.3	<u>+1.6</u> 8.4
4		<u>0.0</u> 8.0	<u>+1.3</u> 1.3	<u>+2.5</u> 8.6
+50		<u>+1.4</u> 8.4	<u>+2.9</u> 2.9	<u>+4.5</u> 9.1
5		<u>+1.3</u> 8.3	<u>+3.9</u> 3.9	<u>+6.4</u> 9.6
+50		<u>+0.6</u> 8.2	<u>+3.5</u> 3.5	<u>+7.2</u> 9.8
6		<u>0.0</u> 8.0	<u>+3.7</u> 3.7	<u>+7.5</u> 9.9
+20		<u>-2.0</u> 9.5	<u>0.0</u> 6.0	<u>+7.3</u> 9.8
+50		<u>-14.0</u> 24.5	<u>0.0</u> 1.0	<u>+5.7</u> 9.4
7	+10 0 4439.90	<u>-3.2</u> 11.0	<u>0.0</u> 5.0	<u>+6.3</u> 9.6
+50		<u>-10.8</u> 20.5	<u>0.0</u> 1.5	<u>+3.8</u> 9.0
8		<u>-16.3</u> 27.4	<u>0.0</u> 1.8	<u>+3.3</u> 8.8
+15	4439.90			

Areas
Cut Fill Excav. Embk't.

	0.0				Sta 0 to 4+50
				8.9	emb 1354.6 Cy.
	480			35.5	566.5 made from
	3353			66.0	cut. balance
	8525			82.0	less 5% borrow
	13610			361.2	Class Solid Rock
	25405			439.5	25% = 187.2
	220.66			280.5	Lo. Rock 75% = 561.5
	82.27			37.3	<u>316.5 to 8+15</u>
0.0	52.15	2.4	38.9		Emb 618.3 Solid Rock
560	783	24.4	48		Have 440 from 5+75
20.79	0.0		1354.6		<u>to 3+10 = 1160 Haul</u>
48.98			64.6		
65.71		106.2			
62.70		118.9			
		46.6			
63.12	0.0	63.1	0.4		6+20 to 8+15
50.53	1.00	82.6	47.8		Emb 175.5 Cif.
23.84	42.00	53.1	33.5		made from Cut.
47.83	320	52.2	54.6		
8.55	5580	42	392		
660	85.31	618.3	175.5		

SECTION 27

PAGE	Area	Excavation - Cub. Yds.			Total Embank't C.Yds.
		Total in Cut	Earth	Loose Rock	Solid Rock
65					2728.7 ✓
65		124.4	124.4		
66					842.9 ✓
66		126.6	63.3	63.3	
67					7531.0 ✓
68		1386.6			1386.6
68					1359.2 ✓
69		1415.8		350.6	1065.2
71		118.7		118.7	
71					2118.3 ✓
72		51.0	25.5	25.5	
72					177.2 ✓
73		229.9	114.9	115.0	
73					245.8
74		42.0	42.0		
75	5.51	429.3	206.9	222.4	
76					187.2
76		618.3			618.3
76					175.5 ✓
5.51		4542.6	577.0	895.5	3257.3
					16533.2 ✓

SUMMARY

77

Cu. Yds. Bank made from Cuts	Cu. Yds Shrinkage deducted	Borrow- Earth	Cu. Yds. Loose Rock	Cu. Yds. Hauled in 100' Culverts	F.F.M. Lumber
700.3	101.4	1734.3	192.7	904	
193.0	32.5	463.0	154.4		
1469.6	303.0	4318.8	1439.6	2000	1568
1359.2				4390	
				4020	498
223.9	94.7	1799.7			1588
76.4	5.0	95.8			
245.8				430	
					1030
566.5	39.4		561.5		
175.5				1160	
5010.2	576.0	8411.6	2348.2	12000	5588

SR
Borrow

SECTION 27- COST.

CLEARING 5.51 ACRES @ $\$35^{00}$ = $\$192.85$

EXCAVATION, EARTH. 577.0 CU YDS. @ 0.14 = 80.78

" L. ROCK, 895.5 " " " 0.32 = 286.56

" S. ROCK. 3257.3 " " " 0.85 = 2768.71

BORROW, EARTH. 8411.6 " " " 0.12 = 1009.39

" L. ROCK 2348.2 " " " 0.30 = 704.46

HAUL, 100 FT. 12000 " " " $0.012^{\frac{1}{2}}$ = 180.00

LUMBER. 5588 FT. B.M. " $\$12^{00}$ = 67.05

TOTAL = $\$5289.80$

2.85

0.78

6.56

8.71

9.39

4.46

0.00

70.5

2.80

1144+44 P.C. 7°L

H 12'0 12'0 H

1157+09¹ P.T.

H 12'0 12'0 H

1163+54 P.C. 8°L

H 12'0 12'0 H

1167+64² P.T.

13'0 H H

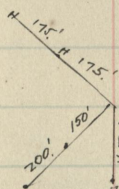
1178+61 P.C. 4°R

H 12'0 12'0 H

1182+29³ P.T.

H 12'0 12'0 H

P.S.
1195+01 9X12 R



1199+71 P.T.

H 12'0 12'0 H

P.S.

1202+84 9X12 L

H 13'0 13'0 H

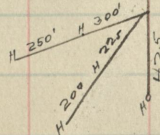
1211 P.T.

1213+11 P.C. 8°L

1219+32² P.T.

H 13'0 H 13'0 3'00' H

P.S.
1228+10 7X12 R



1235+95² P.T.

1238+30 P.O.T.

H 12'0 12'0 H

1242+02 P.C. 60°R

1246+05³ P.T.

P.S.

1259+64 7X12 L

1266+80⁷ P.T.

1278+49 P.C. 8°L

1281+95³ P.T.

1284+72 P.C. 8°R

1292+32⁴ P.T.

1306+78 P.C. 6°L

1310+08 P.T.

P.S.

1311+69 7X12 R

1319+15 P.T.

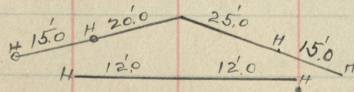
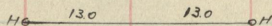
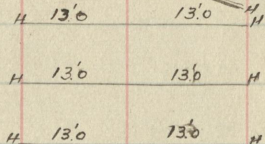
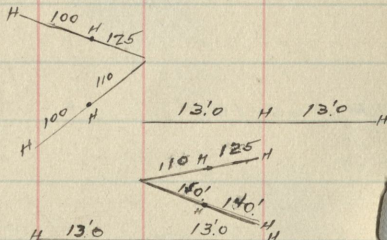
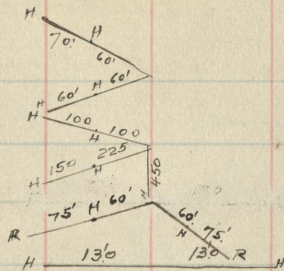
1338+84² P.T.

1359+50 P.O.T.

1368+37 P.C. 8°L

1372+69⁵ P.T.1383+06² P.T.

1385+63 P.C. 8°R

1389+11⁷ P.T.1401+33⁸ P.T.

In

Bench Marks

80

Station	Distance	Elevation	
115			
116	1146+20 35' R	On Hub 4349.08	255+00
1167	1186+75 75' L	" " 4361.09	214+47
	1197+50 125' L	" " 4369.34	202+74
117	1218 125' L	" " 4386.56	183+26
118	1229 90' L	" " 4384.50	172+35
	1237+80 40' L	" " 4391.29	763+45
119	1246+60 100' L	" " 4393.16	152+68
	1259+64 100' R	" " R.P.P.S. 4398.62	141+64
	1269 100' L	" " 4420.71	132+28
119	1278+50 100' R	" " 4431.76	122+78
120	1283+50 75' R	" " 4429.88	117+78
121	1295+60 80' R	" " 4394.63	105+68
		4393.27 Ford	
122	1300 75' L	" " 4393.67	Back 101+30
	1305 60' L	" " 4373.33	96+30
123	1313+20 50' R	" " 4347.59	88+11
	1319+50 100' R	" Cedar tree 4329.08	81+81
124	1325 75' L	" Hub 4330.47	76+31
	1337 75' R	" " 4331.93	
	1353 80' R	" " 4346.11	
	1363 125' R	" " 4370.31	38+31
125	1368+75 90' R	" " 4385.44	
	1374+80 50' R	" " 4403.36	
	1385+15 60' L	" " 4423.67	
	1401+335 P.T.	" " 4432.87	
126	Top r. end Eastside Waiting Room doorsill	4440.26	
	Mayer Depot		

